JUNE, 1961

# ARMED FORCES Management

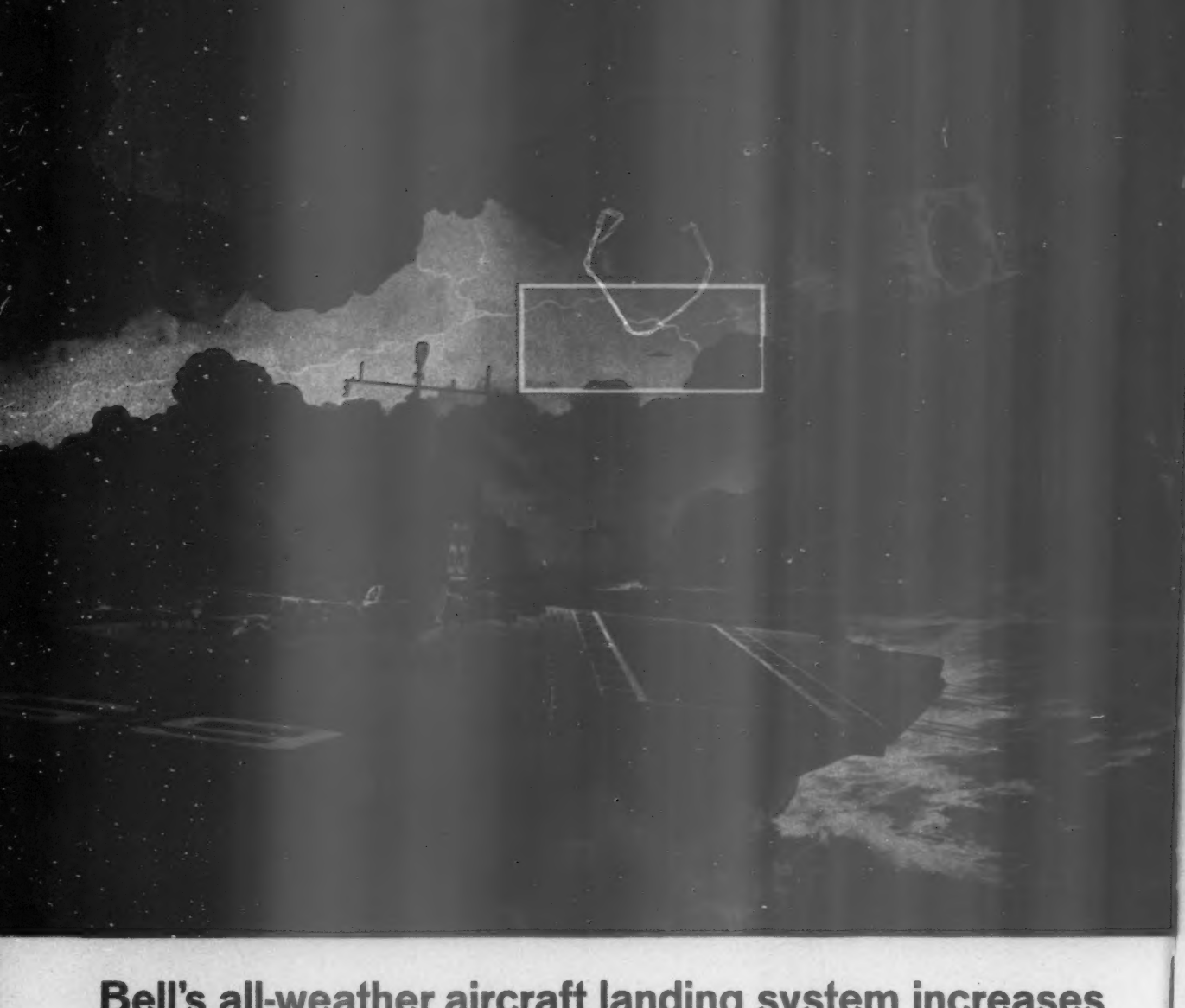
PUBLISHED FOR THE MILITARY SERVICES OF THE FREE WORLD



*Maj. Gen. Richard D. Meyer:*

## How Goes Military Mobility? . . .

## Positive Side of Procurement . . .



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# GAO, Again

IT IS AMAZING HOW GENERAL ACCOUNTING OFFICE reports, on supposed "waste and inefficiency" in defense procurement practices, seem to echo and re-echo intermittently through the halls of Congress.

Rumblings on Capitol Hill indicate that the tide is coming back in again, that currently planned hearings will go over much of the same old stuff that has been swatted about the ears several times already.

We suggest, in fairness to themselves, GAO, Defense and the taxpayer, that this year's Congressional headline hunters begin the 1961 merry-go-round with a statement such as:

"Before we go into the exceptions in detail, we wish to emphasize that it would be extremely improper for anyone to conclude from these hearings that Defense procurement practices are bad or even mediocre."

Certainly, this persistent reiteration of history—as though it were current news—accomplishes little today—except reinforce the opinion of citizen America that things are getting worse and worse, when, in fact, they are getting better and better. The re-hash has become so grotesque lately that these GAO reports are losing all relationship to the lesson they teach.

No one, including Defense, argues with what GAO is designed to do. But nearly all knowledgeable people *do* voice strong objections to the implication of "gross waste."

And they should. The backup statistics: Defense has let some 12 million contracts in the last two years in the negotiated procurement area alone. We could obtain no "reliable" figure on how many of these contracts GAO analyzes but, of those they have checked, *in the last two years they have found something wrong on only 60.* Further, the money "wasted" amounts to only 1.5% (approximately) of the dollars spent on *only those* 60 contracts.

This is more than just a plaintive plea that we all be a little bit nicer to each other. As reported in "The Positive Side of Procurement," (pg. 37) all this furious activity, beating dead flies with sledge hammers, actually encourages what it claims it is trying to prevent.

For one thing, it emphasizes "controlling profits" when Defense buying practices should be emphasizing "the control of costs." For another, without meaning to, it encourages contracting officers to let such usually-"safe" types of contracts as the cost-plus-fixed-fee when "more vulnerable" fixed-price-plus-incentive arrangements frequently would offer the government greater benefits.

Unfortunately, this public hassle will probably never end—at least until some dynamic individual (who is leaving the government service anyway) has the courage to explain the facts of life to these critics *in their forum on their own vitriolic terms.* If and when someone does, he will have considerable advantage. He will be talking facts and not fancy.

# Will You Help?

ON PAGES 33 AND 34 IN THIS ISSUE is a check list in which we invite you to (1) criticize how well we are satisfying your need-to-know on defense business problems and progress; (2) offer suggestions on what sort of information you want to see in here in the future.

Our object: to improve the editorial product. The reason: make even more rewarding the valuable time you've spent seeking information here which may (or may not) help you in your own job. Our aim: to provide you (or in some cases, help you disseminate) the latest information on current defense business practices and the working problems that concern you. (This effort, incidentally, tends to make us unique among military-oriented publications.)

We hope you will appreciate the magazine improvements which will result from your answers—as much as we will appreciate your taking a few minutes to give us the word.

***Bill Borklund***

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*Trade Mark, Reg. U. S. Pat. Off.

# ARMED FORCES Management

PUBLISHED FOR THE MILITARY SERVICES OF THE FREE WORLD

JUNE, 1961

Volume 7—No. 9


## FEATURES



## DEPARTMENTS



## NEXT MONTH:

*A Special Report on Automatic Data Processing will include articles on: Navy Tactical Data Systems, Computers in Single Managerships, Air Force Use of ADP, ADP As A Solution to Army's Logistical Problems . . .*

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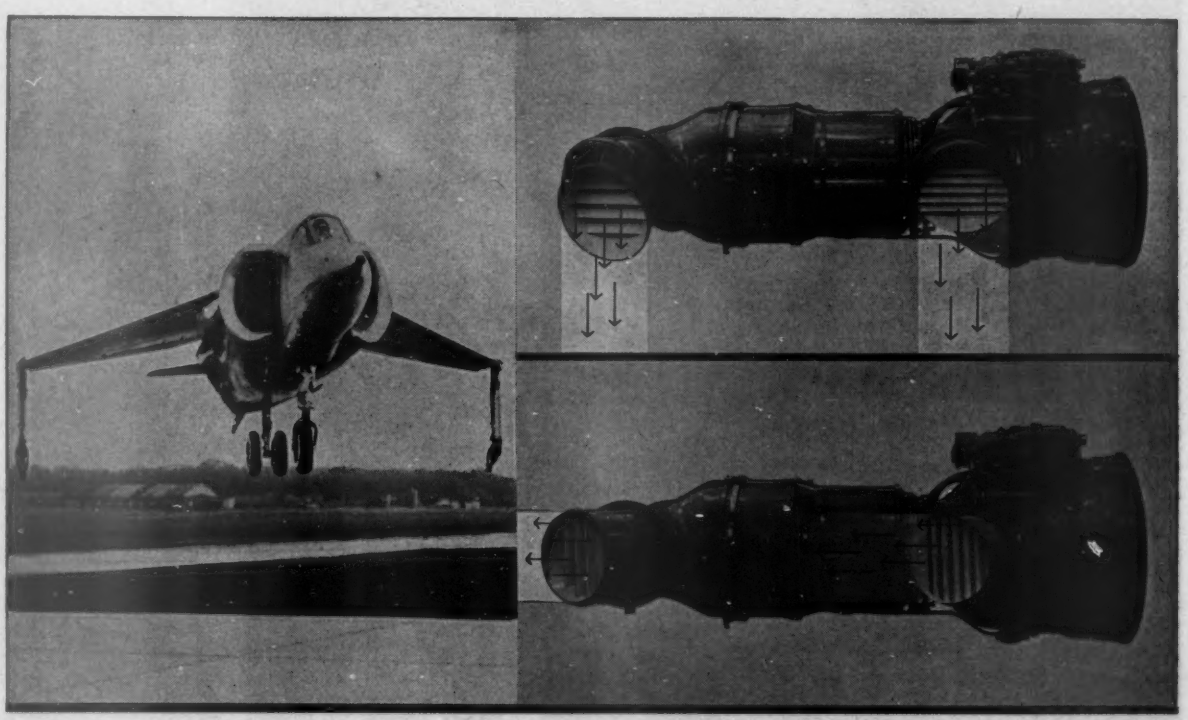
# *LIFT and THRUST from ONE ENGINE – the revolutionary BS 53 Pegasus turbofan*



The new Bristol Siddeley BS 53 Pegasus high-ratio turbofan represents a major engineering breakthrough in the field of aircraft propulsion.

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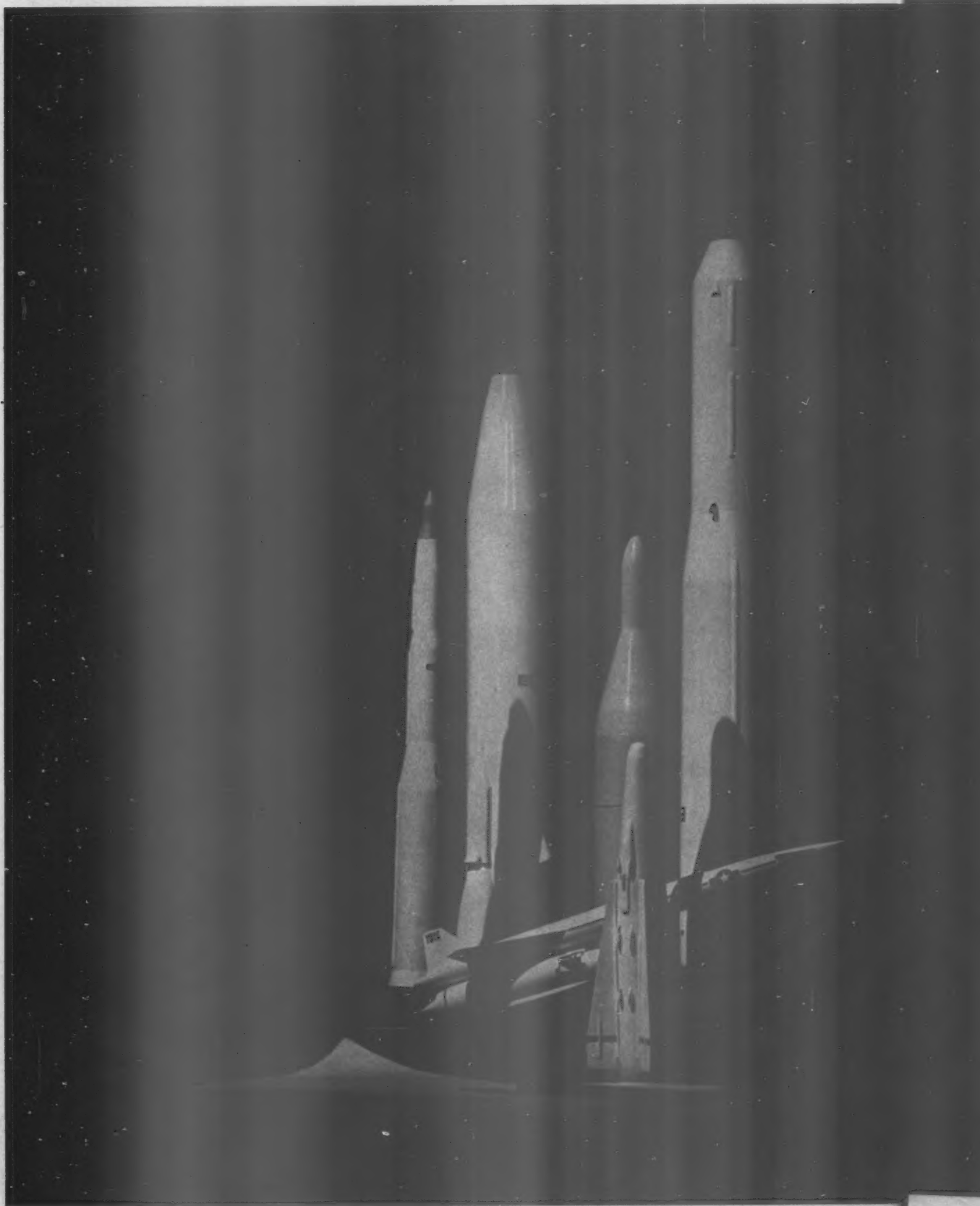

# Where does Hughes fit in the missile picture?

The modern missile ranks as one of man's most ambitious achievements. To design and build an efficient missile requires a wide range of skills — many of which did not even exist a few years ago.

Today, many firms are pooling their special abilities to speed the development of more effective missiles.

Hughes is active in a number of these team projects, as well as in the production of complete missile systems. Here are some examples of Hughes' current missile work:

**POLARIS**—Hughes is a prime contractor for the production of complete guidance systems for the Navy's sub-launched ballistic missile and is a subcontractor for the fire control system.

**FALCON**—With both radar and infrared guidance systems, the Falcon family of missiles has demonstrated amazing accuracy and reliability. To date Hughes has delivered to the U.S. Air Force over 30,000 of these high performance air-to-air missiles. And Hughes recently began production on a new nuclear Falcon missile.

**SIDEWINDER**—This Navy air-to-air missile will carry Hughes infrared detector and cryostat systems in its most advanced models.

**MAULER**—A highly mobile anti-aircraft and anti-missile missile now being developed for the Army, the Mauler will have a Hughes designed guidance system.

**TITAN**—Hughes is manufacturing portions of the launch control systems for this Air Force giant.

Hughes is also under contract to investigate the application of Versatile Automatic Test Equipment (VATE) for the guidance systems on the *MINUTEMAN, SKYBOLT, ATLAS, TITAN* and *HOUND DOG* missiles.

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This determination to research problems as thoroughly as possible, the ability to concentrate such a wide range of technologies toward their solution, and the added ability to translate the results into working hardware are prime assets of Norair in the space age.

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AN EDITORIAL ANALYSIS

# NATO: The Rivets Are Loose

HEADY, FLAG WAVING, DESK POUNDING oratory has poured forth from the White House in recent weeks insisting that, in effect, "from now on we are going to *really* back NATO."

Unfortunately for us—and for NATO—most of this palaver has so far amounted to little more than a dusted off, rewritten version of stuff delivered long, long months ago by various members of the Eisenhower Administration—with just as much conviction and just as little action.

For in truth, unless the present Administration goes far beyond the rhetorical trinkets it has tossed out so far, U.S. treatment of NATO is going to continue to be just as weird as it has always been—a treatment best described once by Rudyard Kipling when he wrote:

"And whatever we do we will fold our hands and suck our gums and think well of it.

"Yes, we will be perfectly pleased with our work, and that is the perfectest hell of it."

While our European allies, at both the working military and the industrial level, are understandably reluctant to gripe publicly (it is very difficult to turn down a several-million-dollar grant even though it is sloppily doled out) they complain bitterly in private. The chief complaint: our persistent penchant for behaving like a rich uncle trying to bail out its poor relations—when in fact the European nations today are not in all that bad a shape by a long shot.

It is obvious, from rumblings on the NATO horizon, that we must start behaving intelligently (and incidentally in our own best interest) in very short order. This is more than just a plaintive request to "please treat our allies like friends." For a great deal less cost (and incidentally a halt to the U.S. gold drain) we would have a far stronger Free World buffer if we started utilizing, and quit patronizing, the resources and assets of our allies.

We can't shape up right now, of course, because we are too busy trying to outlaw evolution—and we have about as much chance of doing this as we have of reversing the flow of the Hudson river. When technology produces new weapons, they must be made part of the arsenal. Translation: NATO needs tactical and strategic nuclear capability.

We don't realize it yet but the sum total of all our confusing gyrations is that our allies have become almost completely disillusioned about our leadership. In effect, they are already saying that we either quit wringing our hands and start doing something sensible—or they are going it alone.

Even beyond this, the divisive waste going on right now is truly horrendous. A few examples:

Can eight allied countries really afford thirteen projects to develop an anti-tank missile? Is it so essential that France developed a Mirage III to compete with the Lockheed 104? Or that the U.S. develop its T-37A trainer in competition with the earlier-developed French Fouga C-170? Is there really a need for not only the U.S. and France, but Australia as well, to develop subsonic target drones for more or less the same military requirement?

Is it very bright for Italy, France, Great Britain and the United States to spend separate development costs on no less than 12 air-to-air missiles? Can the U.S. Army really justify spending $30-million and seven years trying unsuccessfully to develop an operational wire-guided missile (the Dart) and then end up buying the SS-10—which was already operational in 1954?

It takes no clairvoyant genius to spot the major soft spots and reach some specific conclusions on how to toughen them up.

**Item:** This Nation believes in its allies so much that we will not release any information to them until we have proof that the Russians already have it anyway. The main reason why Europe has been unable to make a substantial net contribution to the cold war engineering effort is that European companies generally are unable to obtain, in a timely way, the relevant and often indispensable U.S. technical information upon which a contribution must be based.

What appalls Europe probably more than anything else is that even in the area of *unclassified* technical information, there is an unbelievable morass of both State and Commerce department regulations restricting the flow of communications.

**Item:** NATO can no longer afford to countenance the kind of backtracking in R&D and weapons production which has existed in the past. The answer, obviously, is a more militant integration of American and European efforts, even if this means sacrificing direct U.S. financial assistance to exclusively European projects. (In most cases they don't need it anyway.)

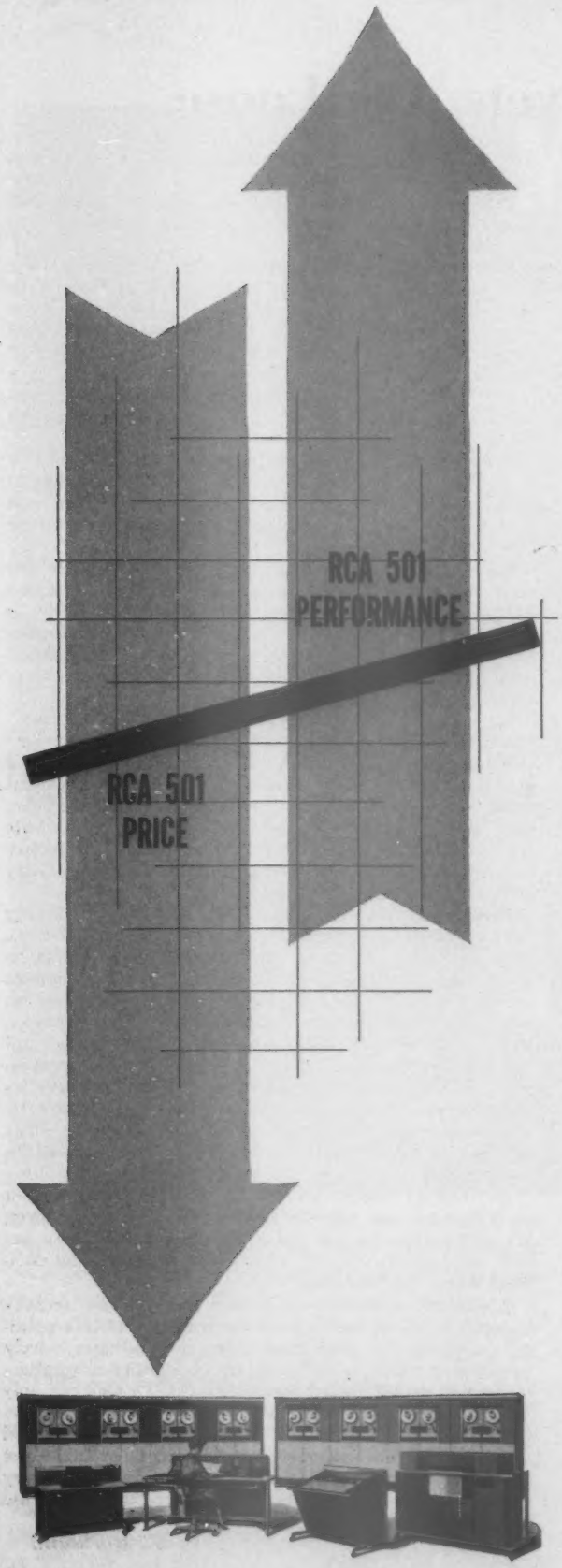
Among other things, the U.S. and other NATO governments should take positive steps to encourage partnerships between American and European companies—instead of opposing them to a great extent as we do now. Potential result: development efforts to satisfy common requirements may be pursued in one country without duplicating efforts elsewhere. At the same time they guarantee that necessary industrial know-how will be available, in times of military or political crisis, to the other allies.

**Item:** The U.S. should realize that for countries having their own large-scale capabilities (such as England, France, Germany and Italy) there can never be a willingness to avoid duplication and to rely on American developments unless the United States is willing, where appropriate on technical grounds, to look to Europe for American development needs. Without this reverse English, economic and political considerations tend to kill any European enthusiasm for NATO-wide integration in any form. Why? Because excessive reliance on American R&D tends to atrophy European capability and, if the shoe were on the other foot, we very predictably would scream in anguish at the sight of such dangers.

As NATO's logical leader, the U.S. is being neither very dynamic nor very far-sighted nor even very clever. We make generous top policy decisions on NATO's behalf, then poison our own efforts with implementing decisions which run the other way.

Apparently without even realizing it, we are actually engaged in busily jarring loose the rivets in NATO's political shield. On the other hand, if the United States is truly prepared to move in the direction of logistics integration, this would go far toward revitalizing NATO. One can only hope the new Administration will have the courage to accept the importance of the issues, make a cold-blooded assessment of U.S. national interests and do what is best for the country. The U.S. can no longer afford the luxury of such things as an irrational NATO industrial defense base.

*C. W. Borklund*

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# How Goes Military Mobility?

*The Army and Marines agree with some segments of industry that their program for the rapid and effective movement of troops has passed several significant milestones. Other industrialists disagree. All feel that acceleration is desirable.*

*by Paul Conlin*

INDUSTRY AND THE ARMED SERVICES—as represented by the Army and the Marine Corps—report progress in the military mobility program on the basis of forward steps taken to date and planned for the future. However, they are reluctant to concede complete satisfaction with the program or to agree upon a common formula for achieving its goals.

This is the conclusion indicated by answers to questions submitted by ARMED FORCES MANAGEMENT to representative military contractors, and to the Army and Marines as the principal services involved in mobility as it refers to the ability of combat troops to move and communicate.

Four questions were addressed to the contractors and the services:

1. Are you satisfied with the progress of the mobility program? For instance, do you think the program is adequately funded, specifically for helicopters, STOL/VTOL, and air-cushion vehicles?

2. Can the military mobility program be speeded by changes in contractual procedures? If so, what changes should be adopted?

3. Would the application of PERT (Program Evaluation and Review Technique) to mobility be advantageous?

4. Should the doctrine of "concurrency" be adopted as a means of accelerating the program?

In their answers to the first question, the Army and the Marines found grounds for agreeing that progress has been made. The answers from industry were qualified by widely varying definitions of the degree of progress made.

The comments on the remaining three questions, both from the two military services and the industry representatives, covered a broad field of divergent opinions which ranged from rejections to endorsements of the proposals.

Maj. Gen. Richard D. Meyer, Deputy Director of Army Transportation for Aviation, said he was satisfied with the quality of the progress of mobility in the Short and/or Vertical Take-Off and Landing and air-cushion fields, but that the amount of progress with such vehicles leaves something to be desired.

(Gen. Meyer's authority on this subject has just been given further recognition by his promotion to Deputy Chief of Staff for Logistics, Continental Army Command, effective June 15.)

Considering all the factors involved, he said, as much progress as can be expected is being made on the VTOL/STOL projects. These should still be considered as in the research and development process and are probably as well funded as necessary at this time.

Progress in the Ground Effects Machine (GEM)-air-cushion area is too slow in his estimation and a great deal more research with more adequate funds than are now available is needed.

"Today, we in the Army and the Navy are doing all we can in a coordinated effort to avoid a GEM gap," he told a group of scientists. "We have 20 jointly devised and in some cases jointly funded research contracts. We hope soon to prototype a 15-ton amphibious air-cushion transporter. I see a great future for the GEM as a self-supporting member of the transportation family."

Gen. Meyer is convinced that the future of Army mobility depends largely on air vehicles and that equipment now coming into the system will provide this new mobility. Differing from the fast, high flying planes of the Navy and Air Force, the Army air vehicles that the General has in mind "move in the nap of the earth and some can take off in a cow pasture and land in a barnyard." So far, he has found that the Army's VTOL/STOL vehicles show the greatest promise for meeting this requirement.

Lt. Gen. Arthur G. Trudeau, Chief

# Mobility Excerpts: Service and Industry

*". . . I am satisfied with the quality of the progress of mobility in the STOL/VTOL and air-cushion fields, but the amount of progress with such vehicles leaves something to be desired. Considering all the factors involved, as much progress as can be expected is being made. The program probably is as well funded as necessary at this time. We hope soon to prototype a 15-ton amphibious air-cushion transporter."*

*". . . We feel that the program for helicopter and STOL/VTOL is adequately funded. We are pushing this program. But the GEM is still in its infancy. Thorough study is needed before these GEM-air-cushion vehicles reach military operational capability."*

*". . . Too many years elapse between drawing board and production. Millions of dollars which would have advanced the helicopter art far beyond its present state have gone for exotic VTOL projects, most of which have been cancelled. We could already have moved faster—and years ago—if sufficient funds had been available for adequate research and development."*

*". . . We only get the right to manage part of the program. If we are to have responsibility for a complete system, we should be given the authority for it."*

*". . . Funding is not the major limiting factor that it appears to be. Our development agencies should be directed to lower their sights so that we can get the required quantities of air vehicles that the present state of the art permits."*

*". . . We can materially speed up our total mobility program by setting new goals which recognize the value of compromise for the sake of dependability and logistical cost. Contractual procedures are adequate."*

*". . . Simplicity and reliability must be the prime considerations in all development planning. Since World War II, there has been an increasing tendency to develop equipment along more complex and sophisticated lines. This has led to increased cost, decreased reliability, and untenable maintenance problems for the using troops."*

*". . . Because of the reluctance of the military to make a decision, the contractor is naturally gun shy to move ahead efficiently on a given program. He fears that he could incur non-reimbursable losses when Government minds or desires are changed later."*

*". . . Inasmuch as an entirely new concept is involved, it seems that the program is supported by very limited funds. Because of the limited funds available, our company has spent more of its own funds on the program than we have receieved from the Government."*

*". . . The program is not and has not been adequately funded. A more aggressive, integrated, and better funded approach should be immediately implemented to provide a whole new era of manned VTOL/STOL vehicles."*

*". . . It is a good program and a reasonable one. The time schedule did not call for more progress than has been made to date. The programs are adequately funded or nearly enough to make them realistic in all areas."*

*". . . Acceptance of air movement as the 'normal' method will greatly increase the effectiveness of weapon systems (from the armed individual to the largest of the new generation surface-to-surface missiles), and will permit major reduction in the weight and bulk of systems that are currently encumbered by vehicular components designed for cross country mobility."*

*". . . PERT and similar U.S. Air Force and Army programming techniques could be helpful if the mobility goal is defined specifically enough and remains defined. I believe, however, that mobility is too large a concept to be supervised by such techniques. Rather it might be better to break the program down into some of its more important aspects and then apply PERT to them."*

*". . . What is needed is a Polaris type directive and a qualified team of operations and engineer project managers to live with the system. PERT must be an integral part of the total mobility program. The application of the doctrine of concurrency is essential to the success of such a comprehensive program. Its value is obvious."*

*". . . The application of PERT would not seem to offer any considerable advantage as far as the air-cushion vehicles are concerned. The doctrine of concurrency would seem to offer at least a partial means of accelerating the program."*

*". . . Specifically referring to light, ground support type of tactical mobility, we feel that there is a real need for improvement, updating and redesign. The concurrency doctrine would well be utilized along these lines to expedite and telescope all the traditionally complex Army Ordnance procedures."*

*". . . Any procurement program can be speeded up by using to better advantage the tools that are available such as letter contracts and/or formal letters of award. These can cut six to twelve months from procurement time in certain conditions."*

*". . . PERT may be too sophisticated for the type of aircraft involved in mobility. However, improved management controls of some type would undoubtably have a beneficial effect."*

*". . . Improved military organization for decision making also will speed up operations. The trend over the past few years has been to require more coordination and approvals which dilutes and slows down the decision making process."*

of the Army's Research and Development Division, is a long-standing champion of the importance of mobility for the Army of the future. His statement:

"Within the framework of future possible conflicts—whether engaged in all-out nuclear war or in putting down aggression with conventional weapons, Army combat troops must react faster, cover more ground, protect larger areas, disperse and regroup faster than ever before. At the heart of this mobility problem is one simple fact—the greater the speed of movement over all types of terrain, the greater the chance of tactical success."

## *Marine Development*

In the Marine Corps, mobility has been regarded historically as a way of life. The ability to move into combat rapidly and effectively is considered basic and will continue to be so.

The Marines feel that progress is being made on the current mobility program as it applies both to ground and air, but indicate some caution on proposals to accelerate research and development in unproven areas.

As one spokesman put it: "We feel that the program for helicopters and STOL/VTOL is adequately funded. We are pushing this program. But the Ground Effects Machine is still in its infancy. Thorough study is needed before these Ground Effects-air-cushion vehicles reach military Operational capability."

When the Marines contemplate the development of new hardware, they bear in mind three criteria established by their Commandant, General David M. Shoup. These are:

1. The item selected must give the Corps the greatest increase in combat capability in its amphibious warfare field at the least cost.

2. Items must be those which the other services cannot develop themselves.

3. The item must give substantial improvement over what is already available.

In the words of Gen. Shoup: "The ultimate goal of the Marines is success in battle. To reach this goal, the Corps needs the best equipment, tactical doctrine and organizational structure that can be devised, subject only to the availability of resources and the attainments of technology."

Looking to the future, Gen. Shoup sees a combination of air and surface vehicles, including VTOL and amphibious, used by the Marines for assault. Once ashore, the Marine Corps will move principally on foot supplemented by light platform vehicles, VTOL transport, conventional motor transport and amphibious tractors.

The Marine aircraft will operate both from carriers and from land bases within range to provide close support either conventional or nuclear. An added source of support would be provided by the U.S. Air Force, at the request of the Marines and controlled by the Marines.

Most of the industry spokesmen preferred to remain anonymous in commenting on the progress of military mobility and its several aspects as outlined in the AFM questions. One of the exceptions was Lee S. Johnson.

As General Manager of the Sikorsky Aircraft Division of the United Aircraft Corporation, and former President, American Helicopter Society, Mr. Johnson said:

"I believe I speak for the large majority of vertical lift people when I make these three points: (1) More Government funds are needed to bring the helicopter to its full potential, especially with the advent of turbine power. (2) The helicopter is today's only practical VTOL and is daily proving this in commercial and military use the world over. (3) We strongly favor non-rotary wing experiments, providing only that the helicopter meanwhile (as it has in the past) is not left to mark time without sufficient support to exploit fully its vast potential."

In Mr. Johnson's opinion, inadequate funding is particularly evident for the development of helicopters in the heavy lift categories of from 8 to 15 tons. Funding is not nearly adequate enough for VTOL/STOL, he says, nor for the development of compound type aircraft which he regards as the next logical generation of air vehicles.

"Too many years elapse between drawing board and production," he says. "Millions of dollars which would have advanced the helicopter art far beyond its present state have gone for exotic VTOL projects, most of which have been cancelled. How can we move faster? Well, I will say we could already have moved faster—and years ago—if sufficient funds had been available for adequate research and development.

## *Two Changes*

"Now we have light-weight, high-power turbines ideally suited for the helicopter. Should we not now expect a real speed-up in the helicopter art and should we not be more than impatient if that speed-up fails to materialize for want of money and imagination?"

Two changes in contractual procedures were also recommended by Mr. Johnson to speed the progress of military mobility. He described the detailed specifications of military contracts as "antiquated" and many of them, he feels, usurp reasonable management prerogatives.

"Under the weapon system concept," he says, "we only get the right to manage part of the program. If we are to have the responsibility for a complete system, we should be given the authority for it. Specifications should tell the manufacturer what is needed, but not how he is to make the product. How he builds it is his own problem."

The second recommendation involves the disallowance of costs. Company-sponsored development costs, he says, should be recognized as items of cost. If these costs are disallowed, the company should be authorized to increase its margin of profit on the contract.

Another industry comment identified with the signature of its author came from Albert E. Blomquist, Transportation Engineer, of Ringoes, N.J.

"Our great problem is the lack of fundamental tactical and intra-theater air lift," he states, "and we can't overcome this deficiency with complex air vehicles priced well beyond any acceptable budget.

"Funding is not the major limiting factor that it appears to be. Our development agencies should be directed to lower their sights so that we can get the required quantities of air vehicles that the present state of the art permits.

## *Compromise Goals*

"We can materially speed up our total mobility program by setting new goals which recognize the value of compromise for the sake of dependability and logistical cost. Contractual procedures are adequate."

Mr. Blomquist's criticisms of costly and complex equipment are in line with Gen. Trudeau's feelings.

"Simplicity and reliability must be prime considerations in all development planning," Gen. Trudeau says. "Since World War II there has been an increasing tendency to develop equipment along more complex and sophisticated lines. This has led to increased cost, decreased reliability, and untenable maintenance problems for the using troops.

"The more complex the system, the more difficult it is for human action to adapt the device to the military environment. Some weapons planners persist in developing systems of fantastic complexity. The result can be an amazingly sophisticated device of marvelous ingenuity, but of high cost and little practical value on the battlefield. This a trend which must be resisted at all costs. It is the manager's mission to stop it—and good management can stop it, early."

Mr. Johnson's views on contract revisions were shared to some extent by another industry spokesman.

"Because of the reluctance on the part of the military to make a decision," he reported, "the contractor is naturally gun shy to move ahead efficiently on a given program. He fears he could incur non-reimbursable losses when Government minds or desires are changed later.

"Also, contractors now tend to avoid designing and testing a prototype vehicle on their own capital, lest it be turned down simply because the military were not a part of the original idea and its subsequent development."

## *Another Comment*

Contractual procedures and budget limitations were discussed further by another industrialist as follows:

"Inasmuch as an entirely new concept is involved, it seems that the program is supported by very limited funds. Because of the limited funds, of course, only a limited amount of investigation can be carried on. Because of the limited funds available, our company has spent more of its own funds on the program than we have received from the Government.

"Contractual procedure has been unusually prolonged. However, the usual length of time required to process contracts with the military services seems longer than necessary as compared to industry standards."

Another manufacturer expressed dissatisfaction with the progress of the mobility program in these terms:

"Specifically in the STOL/VTOL area, the program is not and has not been adequately funded. Although there have been several VTOL research aircraft developed by NASA and the U.S. Army as well as the Tri-Service Logistic Transport competition now going on, there remain many areas where development should be actively pursued and funded."

As examples of these areas, the manufacturer cited suck-down effects, reingestion, aerodynamic stability (pitch up), loss of lift during transition, cross flow and induced lift problems, determination of optimum system for various speed ranges, development of high thrust to weight ratio engines, and broadening the scope of studies on impingement effects.

"These problems are common to various VTOL systems," he said, "and although solutions have in part been demonstrated, there is a great deal of work remaining to broaden these known problem areas.

"A more aggressive, integrated, and better funded approach should be immediately implemented to provide a whole new era of manned VTOL/STOL vehicles."

In contrast, the program was given solid support by another industry spokesman who commented:

"Yes, it is a good program and a reasonable one. The time schedule didn't call for more progress than has been made to date. The more critical dates are ahead. What should have been accomplished this far is the planning and programming and the proposal or rough preliminary designing. It is hard to say how effective this has been because the pay-off is distant yet.

"Yes, the programs are adequately funded or nearly enough so to make them realistic in all areas. There is a tendency on the part of the Defense Department to put too much of a budget on research. Research can be budgeted, but you then have to be satisfied sometimes to stop short of the complete information being sought.

"The question often comes up as to why it is not possible to budget research more closely. When you are going into unknown areas, it is impossible to be sure that you have anticipated and budgeted adequately unless the budget has been set too high. Certainly it is reasonable to say: 'It ought to be worth X-number of dollars to try to get an answer to this question.' It is not usually reasonable to say: 'We must have the answer to this question for X-number of dollars.'"

One of the industry representatives took no direct position on progress in the mobility program, but indicated it could be improved by a change of philosophy about vehicles.

"Attitude can be a major obstacle to progress in any field of endeavor," he said. "It appears to be an obstacle to rapid improvement in the mobility of ground forces in the battle area. As expressed by Gen. 'Pete' Quesada (USAF-Ret.), aircraft must be accepted as the *normal* vehicles for all types of movement for ground units, rather than being considered as vehicles for unusual or emergency operations.

## *The Normal Method*

"Acceptance of air movement as the 'normal' method will greatly increase the effectiveness of weapon systems (from the armed individual to the largest of the new generation surface-to-surface missiles), and will permit major reduction in the weight and bulk of systems that are currently encumbered by vehicular components designed for cross country mobility. Elimination of tracks and bogies, or wheels, tires, axles, and all of the ruggedness resulting from the cross country mobility requirement will—in itself—yield considerable saving in weight and bulk.

"Further reduction in weight, bulk and cost can result from fully integrating the weapon system and the air vehicle which transports it in the battle area. For example, it is probable that separate power supply and communications packages, now provided as an integrated part of the larger missile systems, could be eliminated by utilizing the electrical power and communication equipment which is already provided in aircraft of the size required to move the weapon systems."

Regarding the second point of the AFM questionnaire, Gen. Meyer feels that at least one change in contractual procedures would benefit the mobility program. He was referring to existing procedure which restricts to not more than one fiscal year his contract authority. Funds for Procurement of Equipment and Missiles for the Army, he noted, are authorized for only one year at a time.

If this authority could be extended beyond the one-year period, he said, burdensome administrative details would be eliminated. For instance, the Army has drawn up a program for aircraft extending to 1970 and has determined what items are needed and in what quantities. Whether this program can be realized, however, will depend on the PEMA funds authorized.

## *Time Phasing*

The General discounts the importance of reported difficulties encountered by contractors in dealing with more than one Army contracting agency. As far as the Transportation Corps is concerned, he said, only one individual is authorized to give contractual instructions and he is the contracting officer.

The Transportation Corps is not likely to establish a regulatory set-up as complete or complex as the Navy used with PERT in the Polaris project. Gen. Meyer currently operates a systems management office for mobility and other projects which accomplishes many of the objectives of the PERT program. The systems management group plots out progress objectives step by step, determines problem areas, spells out necessary corrective decisions, and meets periodically for progress reports.

By utilizing a time phasing technique, the General explains, the management office determines whether training programs are moving on time, whether electronics systems are being produced and delivered on schedule, what adjustments should be made to meet distribution demands, and which responsible areas are meeting their requirements. The principal difference, he said, is that PERT established a direct command authority for Polaris whereas his management office operates within the normal procedures of the Office of the Chief of Transportation.

The Concurrency doctrine used by the Air Force on the Minuteman and other programs is completely endorsed

by Gen. Meyer. It is necessary to take calculated risks in parallel procedures for research and development, and production, he says. But the Army does not require funds in amounts comparable to those involved in the Air Force concurrency programs. He points out that no Army aircraft has cost more than $1.25 million and that the average ranges between $250,000 and $300,000.

Both the PERT program and the concurrency doctrine are viewed with some skepticism in Marine circles. They acknowledge the success of PERT as applied to Polaris by the Navy. They point out, however, that Polaris was a single, major weapon system, and they doubt that a program as broad and with as many ramifications as mobility would be aided materially by PERT. Another aspect of the PERT-Polaris success, they emphasize, is that only one service—the Navy—was involved. Mobility, on the other hand, extends across the board to all the services.

On concurrency, the Marines feel the doctrine requires the accumulation of financial resources sufficient to insure the eventual success of the project to which it is applied. Since the Marines do not expect that funds of this magnitude will be placed at the disposal of the Corps, they regard the question as academic.

In the contractual area, lead time is recognized by the Marines as a problem which they are attempting to solve. Lead time is not insurmountable, they insist, because by proper planning in contract procedures, lead time can be accommodated and the situation can be improved.

## *A Balanced Emphasis*

Much of the service comment on these questions was virtually repeated by one of the industry spokesmen who asked not to be identified.

"Certainly the program could be speeded up by awarding parallel study development contracts or by making all of the research contracts on a real Cost Plus Fixed Fee basis rather than under such tight ceilings," he said. "Presently, there is a balanced emphasis on costs and results. While these are not necessarily antipathetic, they tend that way. It is clear that more emphasis on result and less on costs would speed the programs.

"PERT and similar U.S. Air Force and Army programming techniques could be helpful if the mobility goal is defined specifically enough and remains defined. I believe, however, that mobility is too large a concept to be supervised by such techniques. Rather it might be better to break the program down into some of its more important aspects and then apply PERT to them.

"Further, it is really systematic extension of good attention to details of scheduling and estimating with the use of automated electronic equipment so that it is reasonable to guess that other less expensive and complex systems might be used for lower priority aspects of the mobility program.

"If the doctrine of concurrency means what I think it does, I believe that here our answer has to be as citizens and individuals. In other words, have we budgeted adequately or not? How much is mobility worth? Is it worth more than massive retaliation, foreign aid, economic aid to depressed areas, etc.? We can as defense contractors say that in our opinion you are or are not spending enough to reach your goals. It is unbecoming for us to say whether the goals are worth what is being spent on them unless, of course, the goals are not feasible from a technical point of view."

Mr. Blomquist, on the other hand, expressed positive convictions on the benefits of PERT.

## *Endorses PERT*

"What is needed is a Polaris type directive and a qualified team of operations and engineer project managers to live with the system," he said. "Program Evaluation and Review Technique must be an integral part of the total mobility program. There should be a small team of mature auditors assigned to a continuous evaluation of all phases of the program and with the authority to take whatever action is necessary to maintain the balance and pace of the program.

"The application of the doctrine of concurrency is essential to the success of such a comprehensive program. Its value is obvious."

Sikorsky's Johnson also praised PERT, but withheld his indorsement of its application to mobility. He described it as one of the greatest contributions to program management tools. "But," he added, "first give us a mobility program to manage."

Another of the industry representatives asserted:

"The application of PERT would not seem to offer any considerable advantage as far as the air cushion vehicles are concerned. The doctrine of concurrency would seem to offer at least a partial means of accelerating the program inasmuch as a certain amount of basic research on air cushion principles is being carried on. A full scale vehicle could also be built with the present knowledge available at the same time that further investigations are being made on the basic air cushion principles."

Omitting reference to PERT, another spokesman for industry felt that concurrency would be useful in certain areas.

"Mobility is a pretty big word," he said, "and encompasses a vast field of endeavor, militarily speaking. However, specifically referring to light, ground-support type of tactical mobility, we feel that there is a real need for improvement, updating and redesign, to permit our U.S. military to be ready for any major conflicts.

## *A Case Example*

"A vehicle in the 1¼-1½ ton category, for cargo-personnel usage, is a case example. It should be primarily of the platform-concept design, floatable (or at least fordable, for Marines), rugged yet light enough to permit helicopter transportability. No such vehicle is currently in production, and it conceivably will take several years for Army to develop.

"The concurrency doctrine could well be utilized along these lines to expedite and telescope all the traditionally complex Army Ordnance procedures, so that this much-needed item could make a satisfactory debut in 18 months to two years.

"One way to speed up such a program would be to streamline contract procedures through the Office of the Chief of Ordnance-Ordnance Tank Automotive Center system, by delegating decision making authority to a relatively few individuals, then giving them a firm deadline to culminate matters by judicious use of letter contracts and the like."

Letter contracts also were recommended by another industrial representative. "Any procurement program can be speeded up by using to better advantage the tools that are available such as letter contracts and/or formal letters of award. These can cut 6 to 12 months from procurement time in certain conditions.

"Improved military organization for decision making also will speed up operations. The trend over the past few years has been to require more coordination and approvals which dilutes and slows down the decision making process.

"PERT may be too sophisticated for the type of aircraft involved in mobility. However, improved management controls of some type would undoubtably have a beneficial effect."

In the Army's Research and Development Division, Gen. Trudeau has not only been studying the possible applicability of PERT and similar systems, but has taken positive action to improve management communications and save research dollars.

From the lowest echelons up to the General's office, progress is monitored by the red flags of management reporting on the use of dollars, the procurement of dollars, the use of personnel and the use of facilities.

*(Continued on page 32)*




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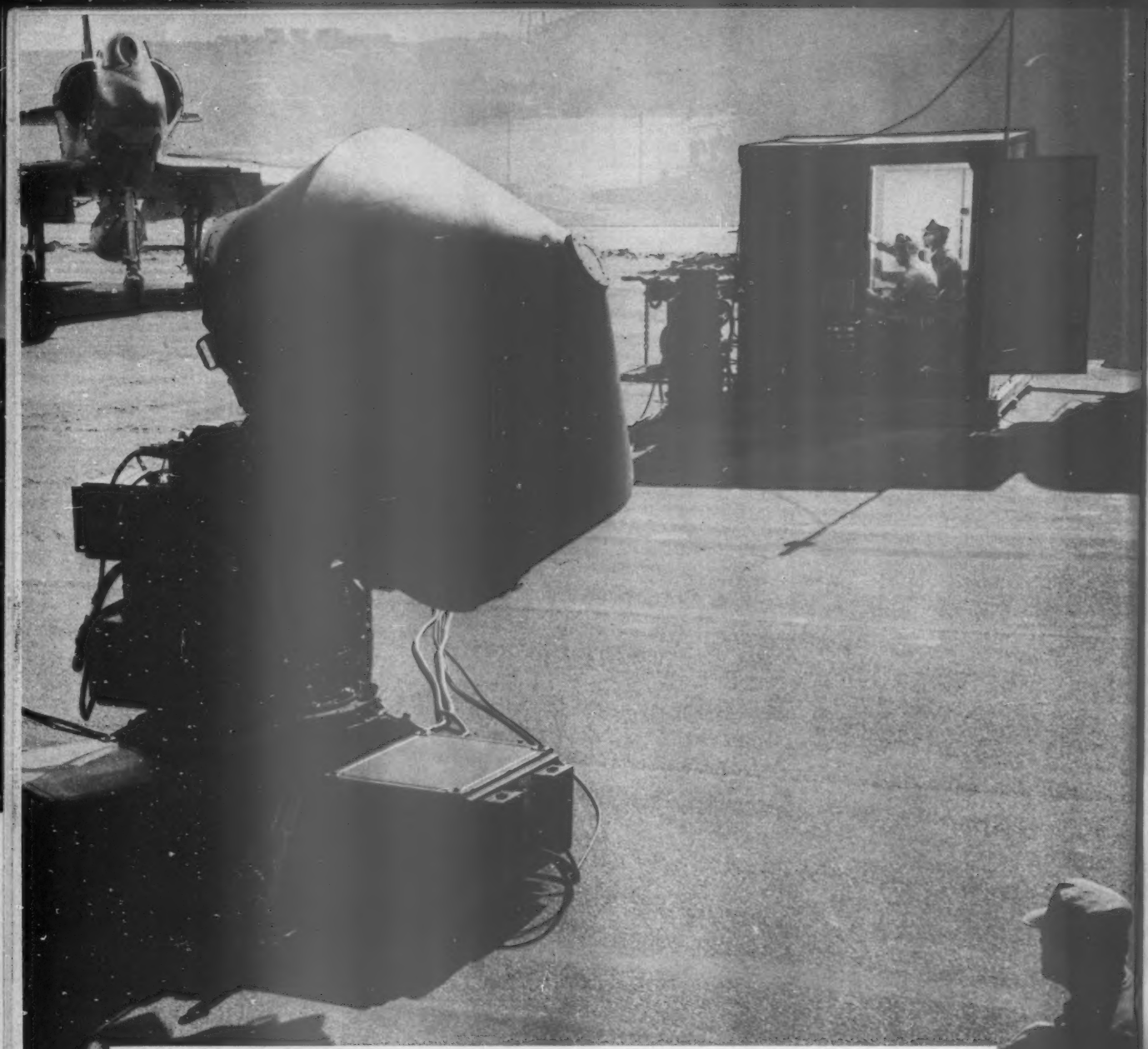

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# Washington Background

*Shuffles May Be Due At the Top*

**In the wake of the Cuban mess,** etal, rumors are as thick as flies around the Pentagon. Among the more logical:

President Kennedy may follow the procedure of former President Roosevelt and pull a top military man into the White House to act as a sort of super military Chief of Staff. One reason: slice the political fat off operational organizations, handle politics himself (which he insists on doing anyway) and start getting unclouded expert military advice.

Same reasoning may chart his course for the planned drastic shake-up in the government's intelligence community.

**And, the rumor has it,** one man figuring prominently in his plans is Air Force Vice Chief of Staff Curtis LeMay—who may already be Air Force Chief of Staff when you read this. Part of the LeMay popularity stems, it is said, from his comments prior to Cuba when the Joint Chiefs were discussing it. LeMay pulled his cigar out of his mouth, said, "It won't work," was overruled, obviously turned out to be right.

**But the clinching factor is** Defense Secretary McNamara's rating of LeMay as "a terrifically effective organizer," (Berlin Airlift, Strategic Air Command, etc.) even to the point, it is said, of having offered LeMay a job with Ford Motor Company about 18 months ago.

*Public Eavesdrops On Pentagon Fight*

**Secretary McNamara's policy** of confining Defense arguments to the limits of the Pentagon Building is proving something less than effective. Current reports of increasing friction between senior military leaders and their recently appointed civilian bosses are too widespread to be groundless.

*French Trade Pact Expected*

**An international trade program of major proportions** is expected to be one of the outcomes of the Kennedy-DeGaulle conversations. Spade work for a program of this type was accomplished, it is understood, when the two leaders exchanged views in May on methods of further strengthening the bonds between France and the United States.

*Air Academy Sets Pace*

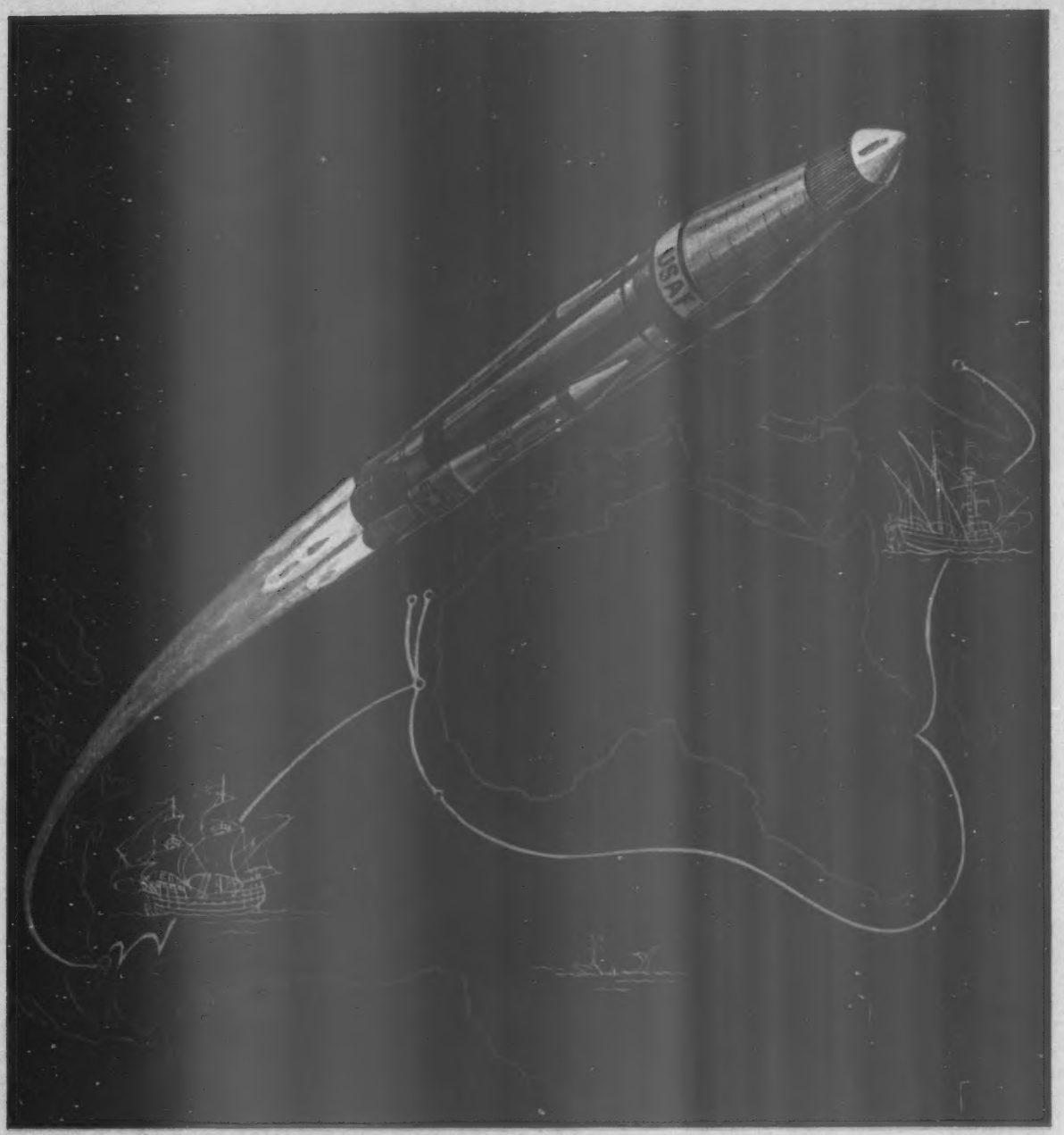
**Although still in the diaper stages** when compared with Annapolis and West Point, the Air Force Academy has placed second in an exam competition with senior classes of 186 other colleges and universities country-wide. Now the precocious five-year-old wants Congressional authority to give graduate-level instruction to seniors who qualify. Annapolis likes the idea; West Point says: this is not the school solution.

*Navy Budget Cuts Travel and Morale*

**Due to a cutback in Navy's travel budget** from a required and asked for $144.6-million to $121.6-million in FY '62, Navy predicts 68,000 of its men will remain at sea or on shore stations because of insufficient funds for transfers. As a result, Navy will probably have to invest far more than the amount of the cutback in a vigorous recruiting campaign. Many Navy men still remember FY '61 when they were extended for six months to a year on their present jobs because of lack of funds.

*Pentagon Space Blackout Persists*

**In hailing the success of the first astronaut-Redstone trial flight,** President Kennedy emphasized his intention to publicize failures as well as successes in the space program. Nevertheless, Pentagon policy on keeping missile fizzles under wraps remains unchanged. Explanation: Kennedy was referring only to civilian experiments.




# *Arma navigates new routes*

**Navigating with cross-staff and primitive compass, Prince Henry's Portuguese pilots took more than 80 years to find a route around Africa and reach India. The Spaniards took another 20 years to cross the Atlantic and reach the shores of Florida.**

**Today, missile-borne inertial guidance can navigate such distances in a matter of minutes and pin-point targets nearly half-way around the world. Other advantages of inertial navigation are immunity to outside interference, all-weather capability, salvo firing, and a minimum of ground equipment.**

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*Pentagon Profile* / **Maj. Gen. Richard D. Meyer**
*CONARC's New Deputy Chief for Logistics*

# "Homework" Pays Off in Staff Work

***Diligence, study and forward thinking boosted this outstanding Army aviator to Deputy Chief of Transportation and Logistics Chief for CONARC. His theory: The future of Army mobility is up in the air.***


*General Meyer qualified in GEM aboard this Bell Air Scooter . . .*

DURING THE KOREAN WAR, Dick Meyer acquired a reputation as "the best staff officer" at Eighth Army Headquarters. He was a Colonel at that time and as Transportation Officer his job was to tell who or what could or could not go where and why.

His decisions were so sound that General Maxwell D. Taylor placed him in charge of the entire logistical support of the combat operation. Over the heads of a number of considerably senior officers, the Eighth Army Commander selected Col. Meyer as Assistant Chief of Staff, G-4, at the age of 41.

Colonel Dick Meyer is now Major General Richard D. Meyer and for the past three years he has been the U.S. Army's Deputy Chief of Transportation for Aviation. By the middle of this month, he will take over a new job as Deputy Chief of Staff, Logistics, Continental Army Command, Fort Monroe, Va.

Although he no longer tells people where they can or cannot go and why, he has a powerful voice in determining how they will get there.

An extraordinary ability to grasp the essential facts of a given problem and present a solution in lucid and articulate fashion has been one of the major contributing factors that built up his stature during the last decade.

In the course of the Korean episode, his analysis and presentation of the facts for people of decision were basic to his job. When a visiting dignitary wanted the realities on the numerous, knotty, logistical difficulties that abounded in that operation, it was usually Dick Meyer who came up with the answers at the staff briefings.

His Eighth Army movements control program for logistical support of the combat forces was a new management technique in combat operations. It made possible the heaviest rate of fire power ever achieved in Korea, and it insured the immediate replacement of enormous amounts of equipment and supplies lost in combat.

This accumulation of accomplishments not only contributed to his "best staff officer" reputation at Eighth Army, but won for him the Distinguished Service Medal, and the Ulchi Distinguished Service Medal with Silver Star of the Republic of Korea.

In the communication of ideas, Gen-

eral Meyer has a private formula that many speakers seem to disregard. Keep it short, keep it simple, and keep it factual, he says.

The General follows the same principles in his formal presentations. A few months ago, he was one of the principal speakers at a graduation exercise. The chairman introduced him with remarks that went on for over seven minutes. The General's speech lasted five.

## *Military Career*

General Meyer never uses notes in his briefings or speeches. A topic and a time limit are all he says he needs. This does not require a photographic mind, he says, but it does require "homework." By "homework," he means a thorough knowledge of the subject and this entails detailed study and first hand experience.

On graduation from the U.S. Military Academy in 1933, General Meyer was commissioned in the Engineers and in 1936 he received the degree of Master of Science in Civil Engineering from the University of California. He taught mathematics at West Point from 1940 to 1942 and before that served on the staff and faculty of the Engineer School, Fort Belvoir, Va.

The General transferred to the transportation business in 1942 when the Army Transportation Corps was organized. As Executive and Deputy Director of Operations for the Chief of Transportation, he earned the Legion of Merit for the part he played in the movement of the Army overseas and its support in the world-wide theater of operations.

In Hawaii and the Philippines, he was active in the preparations for the build up for the final offensive against Japan. Immediately after the war, he commanded the Port of Manila where a peak of one million tons of cargo was loaded and discharged during the month of October 1945. Over the nine-month period from September 1945 to May 1946, his command set up transportation home for more than 414,000 troops, or more than half of the total returned from the entire Pacific Theater.

After his Far East assignments, General Meyer served again at West Point for a three-year tour. He then assumed command of the Transportation Research and Development Station at Fort Eustis, Va., prior to a student year at the National War College. On graduation, he joined the Eighth Army in Korea.

General Meyer's intense interest in the future of air mobility can be traced to his Eighth Army experiences. Among the numerous transportation units under his control were the first two Army transportation helicopter companies to prove their capabilities for providing mobility and logistical support to combat forces in actual operations. Helicopter success in Korea was a dramatization of the value of helicopters in combat and has led to their present ever-growing acceptance and use throughout the Army.

After he returned to the United States in early 1954, the General's convictions on the essentiality of battle field air mobility gained strength during four years of key planning assignments in the Office of the Army's Deputy Chief of Staff for Logistics. Without losing sight of his air mobility studies, he also contributed to the development of the Army's current Five Year Materiel Program, one of the Army's principal management tools.

By June 1958, General Meyer decided to assume a more personally active role in air mobility and signed up for the U.S. Army Aviation School at Fort Rucker, Ala. He received his Army Aviator Badge in July and was placed on flying status.

Qualification as an Army aviator is an accomplishment in which the General takes special pride. It permits him to acquire a continuing and intimate knowledge of the needs of the Army's pilots. It enables him to make a day to day assessment of the capabilities and limitations of the aviation equipment for which he now has major management responsibilities.

The General was 46 when he got his badge. Since then, he has logged more than 700 hours at the controls of single and dual engine aircraft and has earned his Instrument Certificate.

He travels frequently and whenever possible pilots his own plane. His administrative assistant and personal pilot is Major Dick Bywaters, of Greensburg, Ind., who insists that this is an understatement. "I haven't had a chance to touch the wheel on the trips with the General over the past two years," he explains. "Now they call me the best co-pilot in the Transportation Corps."

## *Early Life*

General Meyer was born August 25, 1911, at Saugerties in upper New York State, but he calls Perry, N.Y., his home. He went to high school in Newark which, he points out, is not the New Jersey Newark, but a Hudson Valley town north of West Point where he was eventually to begin his military career in earnest. His previous military experience had been limited to ROTC at Syracuse University where he spent a year on business administration before entering the Military Academy.

The General is the first of his family to follow the professional military pattern, although his father, Gordon Meyer, had wanted to attend West Point. It was with the encouragement of his parents, who now live in retirement at Sarasota, Fla., that the General-to-be groomed himself for the arduous entrance examinations leading to the Academy.

Married to the former Gertrude Mary Breault, of Detroit, Mich., the General and Mrs. Meyer have three daughters and a son. Betsy B. is 22 and a student at the Corcoran Art Gallery in Washington; Katie D., age 21, is seeking a science degree in chemistry at Catholic University, and Anne M., who is 13, has yet to decide on a career. Their son, Fred G., 20, is proud of his single stripe as a Private First Class in the Army. He will be considerably prouder if his and his father's hopes for his enrollment at West Point materialize.

## *Current Activities*

They live in Alexandria, Va., the colonial-type port city a few miles down the Potomac from Washington. The Meyer residence isn't too far from Gravelly Point where the General is assigned a somewhat austere office in Building 7—one of a number of temporary structures which feature air conditioning only as an afterthought. A compensating factor, however, is Davison Field, the Army aviation installation adjacent to Fort Belvoir which is just south of Alexandria. There the General can find an L-23 when he wants one.

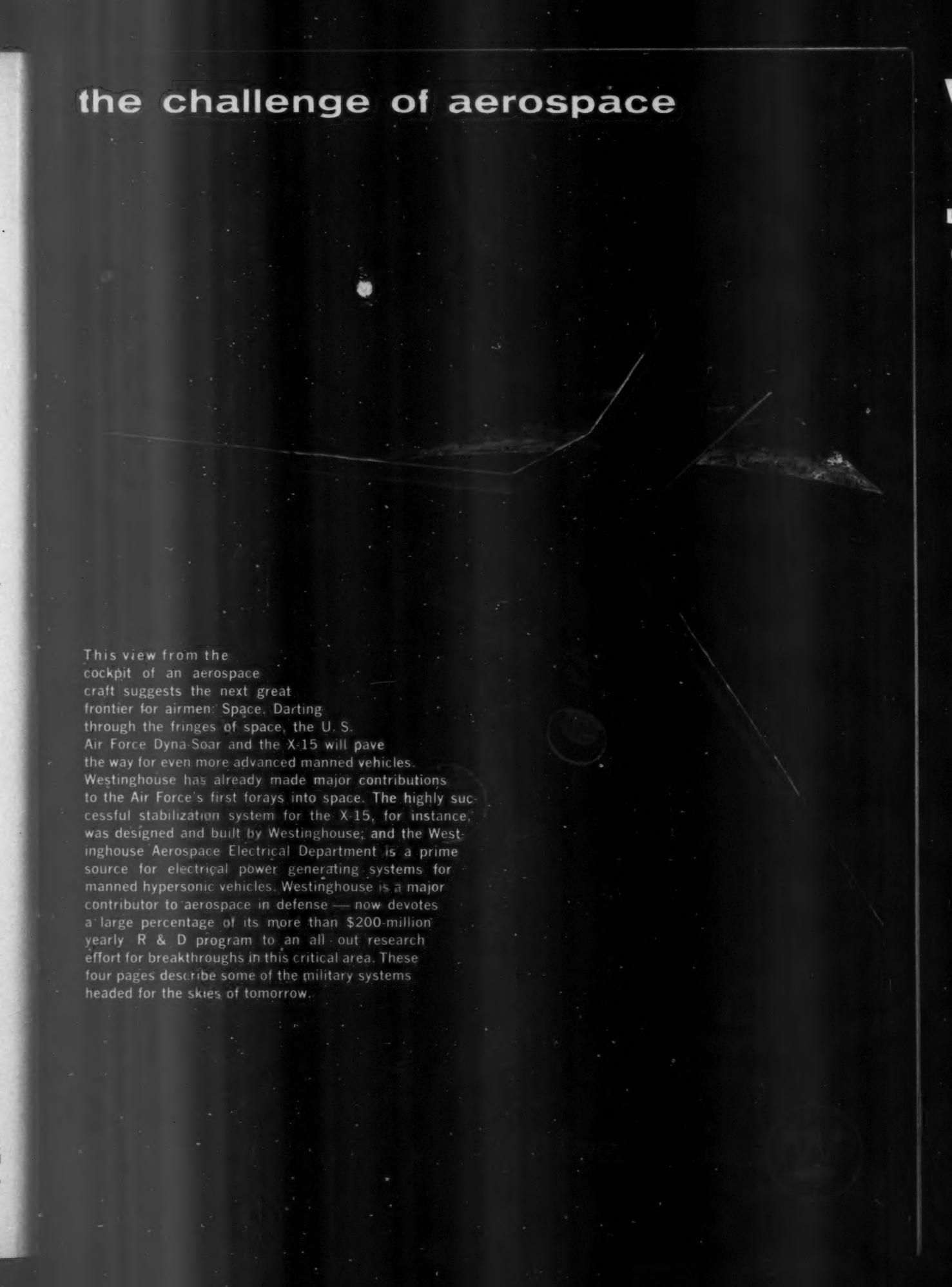
The General carries his well muscled figure on a spare frame measuring six feet two or thereabouts. He has dark brown eyes which carry command authority. He has a full head of dark, curly hair, which Gravelly Point secretaries further identify as "touched with premature grey."

In his official biography, the interests and hobbies of General Meyer are listed as photography, golf, model railroading and mathematics. In the interests of accuracy, he feels that the record is subject to some modification.

He likes to dabble with photography on occasion, can take as sharp a picture as the next amateur. He can take golf or leave it alone, perhaps because he shoots in the 80's. He set up a model railroading club for the cadets while he was an instructor at West Point; since then he has had little to do with miniature trains. Mathematics is not as much an interest or hobby with him as it is a way of life: the slip-stick or slide rule is a tool of his trade.

To wrap it up, the General says: "I'm a flying machine enthusiast. I don't collect them, I drive them." ■

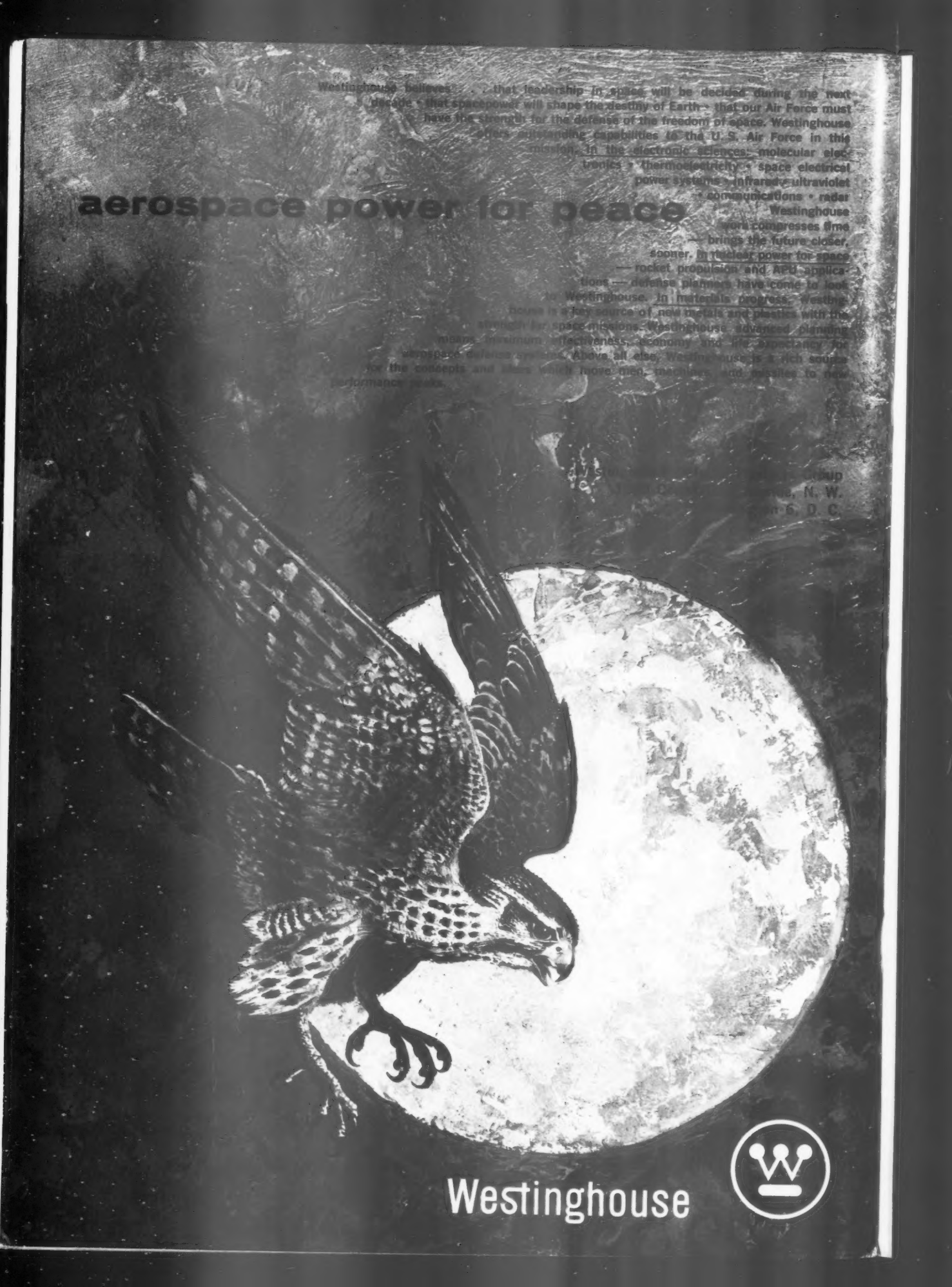
# the challenge of aerospace



This view from the cockpit of an aerospace craft suggests the next great frontier for airmen: Space. Darting through the fringes of space, the U. S. Air Force Dyna-Soar and the X-15 will pave the way for even more advanced manned vehicles. Westinghouse has already made major contributions to the Air Force's first forays into space. The highly successful stabilization system for the X-15, for instance, was designed and built by Westinghouse; and the Westinghouse Aerospace Electrical Department is a prime source for electrical power generating systems for manned hypersonic vehicles. Westinghouse is a major contributor to aerospace in defense — now devotes a large percentage of its more than $200-million yearly R & D program to an all-out research effort for breakthroughs in this critical area. These four pages describe some of the military systems headed for the skies of tomorrow.

# aerospace guardians of freedom

Symbolized in this artist's conception are the four vital orbital missions in the aerospace defense picture of tomorrow: 1. ALERT: satellites capable of detecting missile launchings by sensing the heat radiating from rocket exhaust flames. Such a system will increase the 15-minute early warning presently available to nearly a half hour. 2. OBSERVATION: global observation satellites will gaze down from the aerospace ramparts. Together with the alarm systems in orbit, they will provide the U. S. with warning of impending attack. 3. DEFENSE: counter-missile systems in orbit, and other weapon systems in this class hold the promise of neutralizing ICBM attacks by striking down missiles while they are still far from their targets. 4. SCOUTING: finally, several systems capable of rendezvous with satellites are now under study. Vehicles in this class will "look over" unidentified objects in orbit for positive identification. Among the 60 divisions of Westinghouse, outstanding contributors to advanced aerospace systems are: the Westinghouse Aerospace Electrical Department · the Westinghouse Astronuclear Laboratory · the Westinghouse Air Arm Division · the Westinghouse Electronics Division · the Westinghouse Astroelectronics Laboratory · the Westinghouse Central Research Laboratories. Contributions from these key sources include: Nuclear propulsion; IR, UV, and low-light level imaging systems; space stabilization systems; guidance systems; computers; satellite tracking systems; inflatable structures and radar antennas; molecular electronic systems; space electrical power generating systems; spacecraft support equipment — and new levels of effectiveness and reliability in each area.


aerospace power for peace
Westinghouse

## In My Opinion

In my opinion Mr. Hart should be commended for an excellent article, "What Civil Service Needs: A Real Career Program for Executives," ARMED FORCES MANAGEMENT, May 1961.

There is little doubt that Civil Service does need a career program for executives and all other employees. Although Mr. Hart's proposal is patterned after the elite SS Corps (GESTAPO) used so effectively by Adolph Hitler, it might be an improvement.

The present system of selecting and promoting, with little regard to initiative, ability or knowledge could certainly stand some improvement.

The proposed "SS" system would probably never be accepted in our democratic type of Government, therefore, I would like to offer instead the system established by Genghis Khan which contributed to the rule of his descendants lasting over 500 years. This system which is still used in some instances by the Russians and by our present day Navy, for enlisted personnel, is even more effective today because written examinations may be given.

Any individual is permitted to take a written examination to determine his initiative, ability and knowledge. These examinations are given upon request from the individual. If he fails the examination he is permitted to retake it after a reasonable waiting period in which he is given ample opportunity to improve. There is no limit to the number of times the examination may be taken, however, after each failure a longer waiting period is required. The higher the grade, the harder and more diversified the examination.

The selection of only college graduates for any program is a fallacy. In the first place an individual with a masters degree or LLB who would accept an appointment at the GS-7 or GS-9 level would not have much initiative.

In the second place, history has proven that the majority of great men were not college graduates but were self-educated. To name a few: Lincoln, Carnegie, Da Vinci, Edison, Ford, Getty, Hughes, etc. These men achieved great heights or amassed great fortunes through initiative, drive, knowledge and ability to manage other people. The great masses of human resources are full of such men. What we need is a system to bring them to light.

*Daniel D. White*
Engineering Project Officer
Office of the Chief Signal Officer
U.S. Army



# NATO Forecast

*NATO Alliance Outlook Darkens*

**Few people have noticed yet,** particularly in the U.S., but current debates in Paris are so basic that, if not satisfactorily resolved soon, they could break up the whole organization.

Problem, say our European allies, stems from apparent American insistence that NATO should build up conventional strength, we will control and supply the nuclear armaments "when necessary." Our allies have no intention of buying that, are so adamant they are already insisting in private that if U.S. persists in this proposal, the Nations across the Atlantic will "go it alone" without us. Among their reasons:

**One—The U.S. idea** that NATO should serve as a shield, fighting a delaying action with conventional forces is a World War II type of answer which nuclear technology has outdated. Particularly to nations like France and West Germany it is a militarily untenable position. Said one officer, "in the first place, would Kennedy trade New York for Paris? In the second place, a conventional tussel against superior numbers would almost guarantee the loss of West Germany. If we are going to protect the alliance, the shield has to be thrown up along the Iron Curtain itself with tactical nuclear weapons, not along the Rhine River with obsolescent armaments."

**Two—Allies feel** U.S. "solution" is out of the question, amounts really to rationalizing technological advances (nuclear weapons) out of the picture, rather than figuring out ways to effectively utilize them. Point is, say the Europeans, "U.S. might once have been in a position to ram this down our throats anyway because they were almost the sole source of resources. But, economically, we are no longer a poor relation."

*French May Be In A Dilemma*

**Knowledgeable French military men have known** for a long time that the Algerian tussle was *not* the basic reason the French defense budget has been so high—even though the government has been telling the French taxpayer it was. In truth, it is actually cheaper for France to keep a big slug of its Army in Algeria rather than France itself. Thus, the only real extra cost of the civil war to the French military budget has been the price of the few bullets fired occasionally in anger.

**Actually, France has been caught** in the same price and technology squeeze which has faced every other Free World nation in military hardware developments. Situation has grown very disturbing recently because, with the Algerian problem apparently drawing to a close, French people are going to be expecting a tax cut. When it doesn't come, there will be howls.

Bright aspect of the Army mutiny in Algeria was that DeGaulle could, in effect, wipe out the equivalent of almost a full division, handle this major reduction in force without being required to talk at all about the economic problem.

**NATO aspect:** it has always been assumed that once the Algerian crisis ended, France would no longer be unable to beef up its NATO commitments. Actually, until the dollar problem is solved, they may even be forced to provide less, not more, in the near future.

## Military Mobility

*(Continued from page 18)*

Although mobility is one of Gen. Trudeau's responsibilities, his management efforts are not specifically in that direction. Instead, he wants to insure that the technical services receive on time the information they need for the accomplishment of their projects.

To make sure that projects and programs are adequately dovetailed, all activities in the R&D field are being closely coordinated with the Comptroller. At the direction of the Chief of Staff, the Army is also studying how the best use can be made of automated equipment. It is now expected that within one year, a new system for the instantaneous reporting and communicating of research information by means of automation will be completely installed throughout the Army agencies working on research.

The Army has a growing family of ground and air vehicles which apparently have met the requirements set up by Gen. Trudeau and Gen. Meyer.

In the air, the Army is building up a new group of vehicles, all of which Gen. Meyer says will be turbine-powered by the 1970's.

In discussing their current mobility program, the Marines point with pride to their new Short Airfield for Tactical Support (SATS). This is a portable system, complete with control tower, catapult, arresting gear, emergency barricades, communications, field dispenser unit, and one-man Ground Control Approach system. The entire system, except for the arresting gear which requires a GV-1 or C-130, is transportable by helicopter.

For surface and ground mobility, the Marines are depending on a number of promising vehicles. One is the Sectionalized Carrier and Multipurpose Vehicle (SCAMP). This is a prime mover with a variety of trailing units which can be handled in two loads for lift by medium transport helicopter.

Another is the XM 531, the three-quarter ton Muskrat which is being funded jointly with the Army. This will be capable of water and land mobility and is an evaluation type cargo vehicle. The third land vehicle is the Mighty Mite, a one-quarter ton, lighter and smaller than the Jeep, powered by a V-4 air cooled motor, weighing 1,750 pounds, and air transportable by helicopter.

Of still greater importance to the individual Marine is a study to reduce his combat-ready weight. The Corps does not plan to place the Marines on a diet, but does hope to reduce the weight of individual combat gear by at least 30 pounds. ■

(Please Fold Down)

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To perform the mission successfully, we need your help. Will you take a minute to indicate below your editorial interest and preferences and any suggestions you might have regarding editorial content.

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## ARMED FORCES MANAGEMENT EDITORIAL COVERAGE IN THIS ISSUE

| | Did you read? (If answer is "No," skip to next editorial item.) | | Your interest in subject matter or department? | | | | About how much main text did you read? | | | Did you take any action? (Mark, clip, index, refer to others.) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Editorial Articles** | Yes | No | High | Moderate | Low | None | Nearly All | Over Half | Under Half | Yes | No |
| 1. How Goes Military Mobility? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. Positive Side of Procurement | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. ASTIA Keeps Science Data on Dole Basis | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. NATO Forecast | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. The Man You Need Needs You | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **Editorial Departments** | | | | | | | | | | | |
| 6. Editorial Page | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 7. Pentagon Profile | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 8. Washington Background | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 9. Letters to the Editor | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 10. Research Rundown | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 11. Procurement Trends | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 12. Your Investment Future | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 13. Dates to Circle | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 14. AFMA Newsletter | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 15. Industry Developments | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

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| | Your interest in subject | | | |
|---|---|---|---|---|
| | High | Moderate | Low | None |
| 1. Meaning of top policy decisions, control methods. | | | | |
| 2. Research problems, program management, etc. | | | | |
| 3. Budget headaches, i.e., formulation, control, etc. | | | | |
| 4. Supply problems and procedures. | | | | |
| 5. Automatic Data Processing, Use of. | | | | |
| 6. International Coverage. (NATO operations, etc.) | | | | |
| 7. Personnel. | | | | |
| 8. Key Defense organizations, how they work. | | | | |
| 9. Department of Defense, Annual Issue. | | | | |

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Comments: .....

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|---|---|---|---|
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| Air Force | ..... | ..... | ..... |
| Armed Forces Management | ..... | ..... | ..... |
| Armor | ..... | ..... | ..... |
| Army | ..... | ..... | ..... |
| Army-Navy-Air Force Journal | ..... | ..... | ..... |
| Army-Navy-Air Force Register | ..... | ..... | ..... |
| Aviation Week | ..... | ..... | ..... |
| Data Processing | ..... | ..... | ..... |
| Data | ..... | ..... | ..... |
| Defense Transportation Journal | ..... | ..... | ..... |
| Ground Support Equipment | ..... | ..... | ..... |
| Missiles and Rockets | ..... | ..... | ..... |
| Missile Design & Development | ..... | ..... | ..... |
| Navy | ..... | ..... | ..... |
| U.S. Naval Institute Proceedings | ..... | ..... | ..... |
| Ordnance | ..... | ..... | ..... |
| Signal | ..... | ..... | ..... |
| Space Aeronautics | ..... | ..... | ..... |
| Underwater Engineering | ..... | ..... | ..... |

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# The Positive Side of Procurement

*More fog, misconception and mis-statement clouds procurement than any other area of Defense business. Here are some of the highlight facts which should (1) put the procurement debate in proper perspective, (2) for a change, cut the gloom with a little sunshine . . . .*

*C. W. Borklund*

IN BRIEF:

Defense procurement, the toughest purchasing job in the world bar none, is actually handled with far more efficiency and effectiveness than the public report card indicates.

There are several myths surrounding Defense's buying business which Defense critics emphasize and, by their emphasis on the wrong problems, further confuse an already complicated picture.

Among the warping statements:

1—"Although 85% of Defense dollars are spent through negotiation, this is nothing more than a dodge to beat the strict confines of the demanding efficient advertised bidding procedure. If Defense wasn't trying to improve its friends in defense industry, it could spend 85% of its money through formal advertising."

2—"Defense procurement organization is a loosely controlled miasma of generally sub-standard individuals."

3—"Companies are making too much profit and this, more than any other aspect of the picture, needs Congressional attention."

4—"As the General Accounting Office continually proves, defense procurement is at best mediocre."

5—"Defense has done little to streamline its buying practices since World War II—and the wasted dollars show it."

This constant theme of bitter, and erroneous, condemnation is drawing attention away from the real problem areas. Says one top defense buying expert, "what our critics seem to overlook, possibly because the subject matter requires sophisticated understanding, is that they could make far bigger headlines—and do us and the country a real service—if they concentrated on those areas where we *really* need direction."

IF ALL THE NASTY CONVERSATION about neighbors by all the back-fence gossips in the world were laid end to end, it would probably make for a lot of noise. But, it wouldn't amount to much more than whispering in a wind storm compared to the cutting blasts in recent months by officials in reasonably high places over "the atrocious way the U.S. Department of Defense is wasting the taxpayer's money."

The existence of all this wind is probably understandable. There is certainly plenty of rich, ripe hunting ground on which critics can forage. And just as certainly there is no other military problem area so laden down with part fact and part fantasy.

It is no news that the Pentagon, with its incomprehensibly vast worldwide network of offices and about $25-billion in new money to spend each year, for weapons, equipment, supplies and services, is clearly the largest buying organization in the Free World. They spend an average $100-million a day to buy everything from sandpaper to space suits, from monkey wrenches to missiles.

However, what the caustic complainers invariably fail to point out—mainly because it would cost them the headlines which in most cases is really all they are after anyway—is that, in fact, all this fuss and furor is somewhat akin to cracking egg shells with a steam roller. Unfortunately, very few of the listeners to the headline-hiatus have bothered to figure all this out. As a result, the condemnation clan is being inordinately successful in winning ball games recently with half-points—or so says Defense.

To protect the U.S. taxpayer's pocketbook, and, in this cold war world, his neck for that matter, it is well past time to put this entire "defense-dollar-waste" debate in proper perspective. This drum-thumping onslaught must be headed off soon, say men responsible for military buying. If it isn't, Defense could well be forced into spending the country's money in ways and means which any family budget controller would consider downright dumb.

One additional valve to stopping the charge: saving an inordinate amount of wasted time. Example: 14 times Defense was summoned before different Congressional committees last year to explain procurement. Ten of these times Congress repeated one question: "Why do you negotiate and not advertise?"

It is fairly well known that the defense purchasing job is the toughest in the world, bar none. Revolutionary changes in the past few years in science and technology haven't made it any easier.

## *Waste Exposés*

It's even better now, however, that the General Accounting Office, purported Congressional watchdog of the public treasury, has unearthed "all manner of waste" in the defense business operation, "waste" amounting to several million dollars. The exposés range all the way from building $147-million worth of houses which were never occupied (because people they were built for had already bought their own) to continuing to pay 134 clerks $508,000 a year for work they didn't do at 15 closed plants. Pretty bad, says part-time observers.

But, what is hardly noticed at all about these scandals is that they are never fitted into the big picture. The real background: from July of any given year to June of the next, defense procurement officials will go to the store about six million times. Yet, GAO, in the past *two years*, has found a *total* of only 60 times when they could contend Defense did something wrong. Even on those 60 contracts, the amount of money poured down the drain represented only about 1½% of the total dollar valuation on *only those* 60 contracts. And comparing the "lost dollar" amount to just the yearly total Defense budget is like comparing ants and elephants.

Commented one harassed procurement official, "if my wife had that kind of record, I don't see how it would be proper for me to conclude that her buying habits were bad—or even mediocre."

Frosting on the critics' cake: current hearings on Pentagon "waste" are actually going over much of the old stuff already released, leaving the impression, by repetition, that charges are new and things are actually getting worse and worse. Said one highly ranked public servant with almost 20 years service, "I grow more amazed each year at the ability of these GAO reports to echo and re-echo through the halls of Congress." Little wonder, say Pentagon veterans, procurement officers complain bitterly in private about such treatment.

To most knowledgeable observers, the disturbing aspect of all this is that these crusaders for lesser causes have apparently convinced a few people, finally, in positions of authority that drastic reforms are needed. Possible outcome: the strait jacket they threaten to impose on defense business could easily waste more time and money than all the well-publicized occasional slips have cost—even if they were added up and then multiplied by 10.

For instance, a great many complaints have been thundered on Capitol Hill about Defense Department's use of the negotiated procurement technique—versus formal advertised bidding. Tacked onto this complaint recently has been the contention that Defense actually should spend 85% of its money through formal bidding procedures instead of through negotiation as now.

As the table accompanying this article points out, in actual fact the amount of money which *might intelligently* be taken out of the negotiation pocket and put in the formal bidding pocket amounts to only about 5% of the total dollars Defense spends.

For that matter, the critics always leap into battle from a foregone conclusion, i.e. that formal advertised bidding is clearly the best deal for the government. In fact, for many items, it is one of the worst. If it weren't, Defense would dearly love to spend *all* its money this way. Reason: they get in less trouble. (For some strange reason, people howl when a contractor makes 10% profit on a negotiated contract, never utter a peep if some other contractor makes a 50% profit on a formally advertised contract.)

## *Other Reasons*

There are other reasons why formal bidding is not very bright. But, the most unfortunate aspect of all this hassling is that Congress has been left with precious little time to spend hunting for answers to the main problem—Defense, for example, feels that a fixed negotiated price procurement (with incentives for doing the job for less, penalties for spending more) is probably the best answer in many areas. But at the very time when Defense needs direction on this, pressures of public condemnation are forcing them to move into the less exposed contracting technique of cost plus fixed fee. One result: in effect, they are encouraging industry inefficiency. Guaranteeing costs almost invariably encourages indifferent concern to costs.

Further, to move into the fixed price plus incentives area means employing sharp people who have three things: (1) an open mind, (2) an impartiality toward contractors and (3) a high degree of competence. Few defense buyers are going to be encouraged to utilize these talents if their every effort to do so puts them in an indefensible position, fighting irrational charges.

This "negotiated waste" charge is usually followed closely by the contention that one reason negotiated procurement can't work effectively is that it eliminates competition. The military has stacks and stacks of material to refute that argument but nobody has ever asked to see it.

Another pitfall, say the accusers, is that no contracting procedure based on human judgement can work because the defense buying operation is a monolithic, loosely controlled organization populated by sub-average workers. All of this is patent nonsense as any citizen can find out just by asking.

The very top people who produce the Armed Services Procurement Regulations (the military buying bible) have more direct input and output of daily control over military activities world wide than any other Pentagon office has over any other defense job function. The ASPR committee meets all day, two days a week (currently has before it 50 different cases), gets subjects to resolve fired at it by 60 subcommittees.

## *Excess Profits*

Some 18,000 of the ASPR (the military buying bible, which after 13 years is still being improved) go directly to users, untrammeled by the intermediary red tape which harries other Pentagon operations.

How good are the procurement people themselves? According to the Pentagon, "this canard about sharp company officials taking advantage of poor defenseless military negotiators is mostly baloney." To be sure, because they don't pay as much, they have a lot of trouble with turnover and "you're likely to lose your best guy." But their standards are just as high as those in industry. And people who know all the highly sophisticated details about military procurement agree that, as a group, by and large defense negotiators are very well trained.

Of their efforts, former top flight businessman and current Defense Secretary Robert S. McNamara, told Congress recently that "the quality of the defense business operation is quite as good as that of any private business in the country."

This slowed down the critics hardly at all, even though they are a long way from having anything like McNamara's qualifications for such judgments.

Another of the critics' favorite targets is the business about industry "excess profits." They have generally ignored the statistic that, in fact, com-

pany profits from defense contracts are much slimmer on an average, and in almost all specific areas, than they are in the private economy market. And they pay virtually no never mind to the fact that this head pounding of "company profiteers" is actually encouraging the Nation's precious brain power and industrial resources to stay away from the Defense effort.

But most of all, this concentration on the frosting ignores completely the really important part of the picture, the cake itself. Experienced defense buying people have been trying for a long time to get Congress to give them some legislation which would enable them to concentrate on costs. As defense men with a career in the buying field know generally, profit control actually encourages waste and excess costs. Cost control is where the real money can be saved.

Conscientious industry people are even trying to help fight this battle—and having just as little success—even though, as one electronics company president pointed out at length recently:

"Regulations governing procurement are contributing to the high cost of National Defense. They cause the purchase of systems which are excessively expensive to operate and maintain in relation to their initial cost. In electronic procurement for example, only 25% of the budget allocation goes into *new* weapon systems.

"The annual maintenance costs of electronic weapon systems inventory is about 60% of its initial cost. (This is many times greater than the maintenance cost of home or industrial equipment.)

"Because approximately 68% of the dollar value of all defense contracts are awarded on the basis of price alone, industry designs and builds systems which will meet the instantaneous, minimum requirements at the lowest possible price. This is contrary to the needs of our National Defense. We must *have* superior systems created with *superior* design engineering, materials and manufacturing processes. (Instead we get systems which, because of maintenance costs, are actually rebought three times in five years.)

"Rather than letting contracts for complex systems on price alone, the government should adopt a procedure which will enable the contracting officers to consider capability, quality, and delivery, as well as price in awarding contracts. If the failure factor could be cut by as little as 50%, the government could save annually as much as $1.7-billion, or one-third the total electronics budget, on maintenance, support equipment and spare parts costs in just electronics alone."

# The Buyers Don't Care?

ROCK-THROWERS OFTEN USE, as "justification" for blasting Defense handling of dollars, the rather vague generalization that military employees don't really worry very much about the taxpayer's money. As with a great many other barbs, this one can't stand exposure to facts.

Example: Personnel participation in the well-documented, but little-publicized, military suggestion program. As the roster of sentinels along President Kennedy's new frontier continues to grow, one name will appear hardly at all: Benny Suggs. Yet, last year alone, Benny saved Uncle Sam almost $70-million.

Benny has been performing like this for years but he remains virtually a nobody. The reason: "Benny Suggs" is actually government office talk for Beneficial Suggestions—which flow by the thousands through every kind of bureaucratic channel.

An employee suggestion program is nothing new, of course, either in government or private industry. But when you do things on the massive scale the government does, individual small savings quickly become substantial.

A Naval Ordnance physicist in California spark-plugs simplified design and production of the Sidewinder air-to-air guided missile and saves the government $46-million in his idea's first year of operation alone.

The dollar value of this contribution and a veritable flood of others like it, is impressive. Civilian employees alone in the Army, Navy and Air Force in the last fiscal year contributed 277,816 suggestions, saw almost half adopted, yield *measurable* first year benefits of over $61-million.

Defense has high regard for its suggestion program, realizes that dollar loss due to employee indifference would be appalling if it could be measured, processes an individual's ideas with streamlined simplicity. There are only two prerequisites: 1—the employee's idea must be of value to the government, and 2—the suggestion must be of a nature above and beyond the expected prformance of the participant for which he receives his regular government pay check.

Highlights of employee interest: thanks to encouragement 18 years ago from an Admiral-to-be, Elmer Riddick, a 59-year-old Navy "blue collar" worker and former classified laborer, is now hailed as the "champion suggester" of all Army, Navy and Air Force civilian employees throughout the world. Quarterman photographer at the Norfolk Naval Shipyard, Portsmouth, Va., Riddick has offered over 180 ideas during his government career, has seen 83 of them adopted.

Defense's challenge to critics: "show me an outfit which can match that record."

The final, most frequently voiced charge: Defense is doing little to streamline its buying practices. This one Defense can undercut, if anyone would listen, with a veritable rapid fire barrage of facts.

Among them: the creation and continuing extension into a great many buying and selling areas of the single manager idea under which one service organization does the buying of a common-use item for all three services. Besides providing centralized control, eliminating duplication, and insuring effective utilization of stocks, services and facilities, it is saving millions. One-time savings are estimated already to be over $385-million and the single manager system is just getting started.

Item: military supply inventories are being reduced at a rate of $3.5-billion per year. The meaning of this: Defense is learning rapidly how to do a better job with less.

Item: military warehouses covering 55 million square feet of space have been closed with more than half of this space already transferred for other government or commercial use.

Item: in addition to the savings in material, the cost of operating the military supply system has been reduced by $100-million per year.

The total list of items like this would fill a good-sized catalog. But, said one official, "If we printed it, no one would buy it. They're more interested in gossip."

Defense contends it is not necessarily looking for bouquets to offset the brickbats. What they really want is some attention by people in authority to their real problems. And, they say the potential savings in resources and boost in security ought to encourage the U.S. taxpayer to demand the same thing. Finally, they point out, all that the clobbering headlines recently have actually done is provide the taxpayer—the man who is paying the bills—with some pleasantly distracting, and terrifically expensive, entertainment.

# Example: The Case for Negotiation

ON THE OPPOSITE PAGE, categorized by buying authority, is a dollar outline on the last two full fiscal years of military procurement.

Here is the backup on why the Pentagon buys, and *must* buy, in the ways it does:

Law says that all government agencies shall let all contracts by a stringent set of rules "formal advertising" *except* for 17 exceptions. Law also says that "any form other than formal advertising (as defined by those rules) shall be called 'negotiation.' (This definition, as the accompanying article indicates, is part of the reason half-informed critics are so successful in implying—erroneously—that if it's not formal it's not competitive.) Here is how the key exceptions break down, and the justification for "negotiating":

**(1) National Emergency**

An outgrowth of the Truman Korean-War emergency days, this exception has five sub-categories which, in cold-war practice, has seen far less abuse than you have been told.

**(a) Labor Surplus Area and Industry Set-Aside**

Politically and economically sensitive, category title is self-explanatory. But even in its "relief-giving" role, firms qualifying must match lowest competitive bid by firms outside the labor surplus area.

**(b) Small Business Set-Aside (Unilateral)**

Much has been written about this, again, politically touchy category. Even though McNamara has ordered the amount be increased 10% in the next fiscal year, practical opportunities to award to small business are falling off.

**(c) Disaster Area Set-Aside**

Title self-explanatory. No money was spent here in FY '59 or '60 because, officially at least, there were no disaster areas then.

**(d) Experimental, Developmental or Research Not More Than $100,000**

This is actually an exception of administrative necessity. Strict letter of the law requires ordinarily that all R&D contracts be specifically approved personally by the Defense Secretary. Truth is he could do little else if it were not for this category. Reason: in FY '60 alone there were 12,752 R&D contracts let amounting in each case to less than $100,000.

**(2) Public Exigency**

The "fire drill" clause, this one is used in such emergency situations as when a ship due to leave port tomorrow suddenly finds it needs a standard spare part—and there is no time to advertise.

**(3) Purchases Not More Than $2,500**

History on this one goes clear back to the Civil War. Reason for it: Cost of advertising would be as much as cost of the item itself. (There is competition, however, since standard practice is to telephone two or three companies for a price, award to the lowest bidder—but it's called "negotiated" because there is no advertising, no public opening of bids.)

**(4) Personal or Professional Services**

Must go in the negotiated procurement section because formal advertising requires that the military draw up precise, clear cut specifications so all who are bidding are bidding on the same thing—and nobody has yet figured out a way to be precise when buying professional skill.

**(5) Services of Educational Institutions**

For the same reasons as (4) above it is not appropriate or even feasible to advertise formally.

**(6) Purchases Outside U.S.**

Military found they had to put this one in because there are so many buying rules that foreigners just don't understand the system and can't cope with it.

**(7) Medicines or Medical Supplies**

Like category (3), this one has been in existence for over 100 years, revolves basically around the theme that Defense ought to be able to pay attention to quality in the medical area—a factor for which formal advertising allows no consideration.

**(8) Supplies Purchased for Authorized Resale**

Basically a PX or brand name item, amounts essentially to fact that you can't buy Cokes from the Pepsi Cola Company or Kent cigarettes from anybody but P. Lorillard Company—and thus can't formally advertise.

**(9) Perishable or Non-Perishable Subsistence**

Like many of the other items which fall under negotiated procurement, this one is here only because it will not fit the very binding criteria of formal advertising.

**(10) Impractical to Secure Competition by Formal Advertising**

This is the one category which is most susceptible to misuse. Defense knows it must watch the category like a hawk. This used to be the old "sole source" idea. Buying utilities comes under this but, and here is the soft spot, spare parts also frequently are bought through this category.

**(11) Experimental, Developmental, Test or Research**

Area frequently catches Congressional squawks though, in fact, it should be one of the least susceptible to complaint. In buying R&D, military frequently can't even write *specific* criteria, must seek out best qualified company using a host of criteria which in fact make negotiation in the area far more competitive than formal bid buying.

**(12) Classified Purchases**

As noted above, formal advertising requires public announcement of specifications, public opening of bids. On hardware development and/or purchases with a security tag of confidential or higher, obviously, the specifications themselves prohibit formal advertising.

**(13) Technical Equipment Requiring Standardization and Interchangeability of Parts**

Used mostly for re-supply purchases to inaccessible geographical areas. Example: It doesn't make much sense to advertise to all heavy equipment manufacturers for bulldozer spare parts to supply Greenland when the only bulldozer they will have up there is built by Caterpillar.

**(14) Technical or Specialized Supplies Requiring Substantial Initial Investment or Extended Period of Preparation for Manufacture**

The big category (over $6-billion in FY '60), this one is the standard exception used on the big buys. It would be stupid, in fact, to formally advertise in this situation. For one reason, it makes little sense to ask another company to duplicate the investment of, say Convair in building up facilities to produce the Atlas missile.

**(15) Negotiation After Advertising**

Not a dodge, as complainers infer, but actually a protection, this category is used by Defense if formal advertising bid prices indicate collusion or are unusually high.

**(16) Purchases to Keep Facilities Available in the Interest of National Defense or Industrial Mobilization**

Title self-explanatory. Changing times, Defense indicates, might make a case for this category being misused (if Services could agree times have changed) but activity in the area is small.

In sum: say defenders of Defense buying practices, the facts clearly point out that more than possibly 5% of the total dollars spent in negotiated procurement are open to a practical move from negotiation to formal advertising. Said one official, "to contend, as many of our critics do, that 85% of the money we spend should be let through formal contracts is sheer nonsense."

# NET VALUE OF MILITARY PROCUREMENT ACTIONS UNDER FORMALLY ADVERTISED AND NEGOTIATED CONTRACTS BY NEGOTIATION AUTHORITY [a]

Fiscal Years 1959 and 1960

(Amount in Thousands)

| Negotiation Authority | July 1958-June 1959 | | | | | July 1959-June 1960 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Army | Navy | Air Force | Total | | Army | Navy | Air Force |
| | Amount | Percent | Amount | Amount | Amount | Amount | Percent | Amount | Amount | Amount |
| ALL ACTIONS, TOTAL | $25,312,065 | | $6,008,638 | $7,671,313 | $11,632,114 | $23,688,533 | | $5,882,216 | $7,420,636 | $10,385,681 |
| INTRAGOVERNMENTAL | 758,347 | | 248,148 | 141,219 | 368,980 | 780,875 | | 256,265 | 154,319 | 370,291 |
| FORMALLY ADVERTISED | 3,255,682 | | 1,354,454 | 1,357,085 | 544,143 | 3,169,521 | | 1,347,685 | 1,364,352 | 457,484 |
| NEGOTIATED [b] | 21,298,036 | 100.0% | 4,406,036 | 6,173,009 | 10,718,991 | 19,738,137 | 100.0% | 4,278,266 | 5,901,965 | 9,557,906 |
| Section 2304(a) | | | | | | | | | | |
| (1) National Emergency (Sub-Total) | 473,606 | 2.2 | 142,277 | 153,144 | 178,185 | 419,861 | 2.2 | 150,083 | 116,414 | 153,364 |
| (a) Labor Surplus Area & Industry Set-Aside | 121,486 | 0.6 | 85,759 | 18,785 | 16,942 | 37,342 | 0.2 | 29,659 | 4,575 | 3,108 |
| (b) Small Business Set-Aside (Unilateral) | 61,280 | 0.3 | 30,606 | 4,655 | 26,019 | 60,391 | 0.3 | 19,261 | 5,320 | 35,810 |
| (c) Disaster Area Set-Aside [c] | ..... | .... | ..... | ..... | ..... | ..... | .... | ..... | ..... | ..... |
| (d) Experimental, Developmental or Research Not More Than $100,000 | 250,090 | 1.2 | 89,024 | 74,359 | 86,707 | 289,805 | 1.5 | 101,604 | 80,022 | 108,179 |
| (e) Modifications Authorized By Existing Contract Negotiated Prior to January 1, 1956 | 40,750 | 0.1 | (-)63,112 | 55,345 | 48,517 | 32,323 | 0.2 | (-)441 | 26,497 | 6,267 |
| (2) Public Exigency | 199,218 | 0.9 | 41,140 | 81,283 | 76,795 | 143,924 | 0.7 | 17,320 | 36,742 | 89,862 |
| (3) Purchases Not More Than $2,500 | 769,323 | 3.6 | 340,254 | 207,815 | 221,254 | 825,287 | 4.2 | 358,042 | 243,325 | 223,920 |
| (4) Personal or Professional Services | 81,665 | 0.4 | 42,387 | 13,492 | 25,786 | 58,563 | 0.3 | 24,559 | 11,218 | 22,786 |
| (5) Services of Educational Institutions | 335,818 | 1.6 | 89,814 | 84,799 | 161,205 | 298,645 | 1.5 | 60,196 | 113,068 | 125,381 |
| (6) Purchases Outside U.S. | 1,117,228 | 5.2 | 594,554 | 319,539 | 203,135 | 940,321 | 4.8 | 505,092 | 257,313 | 177,916 |
| (7) Medicines or Medical Supplies | 33,959 | 0.2 | 408 | 33,018 | 533 | 53,228 | 0.3 | 622 | 51,428 | 1,178 |
| (8) Supplies Purchased for Authorized Resale | 128,555 | 0.6 | 99,514 | 11,769 | 17,272 | 135,966 | 0.7 | 107,557 | 7,796 | 20,613 |
| (9) Perishable or Non-Perishable Subsistence | 480,096 | 2.3 | 474,141 | 1,986 | 3,969 | 441,764 | 2.2 | 436,632 | 2,674 | 2,458 |
| (10) Impractical to Secure Competition by Formal Advertising | 3,966,992 | 18.6 | 481,342 | 1,298,439 | 2,187,211 | 3,323,626 | 16.8 | 479,158 | 990,338 | 1,854,130 |
| (11) Experimental, Developmental, Test or Research | 4,027,675 | 18.9 | 487,228 | 503,657 | 3,036,790 | 4,390,450 | 22.2 | 556,252 | 635,961 | 3,198,237 |
| (12) Classified Purchases | 630,148 | 3.0 | 100,733 | 517,293 | 12,122 | 964,087 | 4.9 | 90,234 | 874,281 | (-)428 |
| (13) Technical Equipment Requiring Standardization and Interchangeability of Parts | 12,897 | * | 5,515 | 7,286 | 96 | 38,014 | 0.2 | 25,252 | 12,762 | ..... |
| (14) Technical or Specialized Supplies Requiring Substantial Initial Investment or Extended Period of Preparation for Manufacture | 7,022,201 | 33.0 | 284,379 | 2,308,903 | 4,428,919 | 6,034,420 | 30.6 | 464,612 | 2,075,603 | 3,494,205 |
| (15) Negotiation After Advertising | 2,268 | * | 187 | 939 | 1,142 | 75 | * | ..... | 24 | 51 |
| (16) Purchases to Keep Facilities Available in the Interest of National Defense or Industrial Mobilization | 1,345,573 | 6.3 | 944,096 | 362,521 | 38,956 | 973,761 | 4.9 | 741,689 | 185,529 | 46,543 |
| (17) Otherwise Authorized by Law | 670,814 | 3.2 | 278,067 | 267,126 | 125,621 | 696,145 | 3.5 | 260,966 | 287,489 | 147,690 |

[a] For definitions and coverage, see Notes on Coverage.
[b] Statutory authority for negotiation is contained in 10 U.S.C. 2304(a) which specifies 17 circumstances when negotiation is permitted.
[c] No disaster areas were designated by the President for procurement purposes during fiscal years 1959 and 1960.
*Less than 0.05%.

# WHITE PAPER UPS UK DEFENSE

*by Michael Donne*

THE pattern of British defense policy and spending for the next twelve months has been set during the past few weeks by the publication in the U.K. of the detailed annual "White Paper" on Defense and the three statements from the Armed Services.

This year's White Paper took the form of a progress report on defense, following the lines laid down in recent years since the now-famous White Paper of 1957, which set the doctrine of increasing dependence on guided weapons, although, contrary to many impressions, the 1957 White Paper did not rule out the continued existence of manned military aircraft.

In fact, the key to Britain's defense policy is to be found in the statistics for spending, as follows:

| | £ Sterling Millions | |
|---|---|---|
| | 1961-62 | 1960-61 |
| Admiralty (Navy) | 413.20 | 397.50 |
| War Office (Army) | 506.90 | 487.45 |
| Air Ministry (Air Force) | 526.67 | 529.46 |
| Ministry of Aviation | 190.20 | 185.35 |
| Ministry of Defense | 18.63 | 16.57 |
| Totals | 1,655.60 | 1,616.33 |
| | ($4.64 Billion) | ($4.53 Billion) |

These figures show clearly that the bulk of spending in the coming year will continue to be on the Air Force. The RAF Budget is the biggest of all the three Services, while a substantial proportion of the money laid out by the Ministry of Aviation—which is the main procurement agency for the forces—will go on production and research in military aircraft.

The entire defense budget of £1,655.60-million can also be analyzed a different way, viz:

| | £ millions |
|---|---|
| Pay and allowances for personnel | 331.25 |
| Pay of reserve forces, administration, etc. | 20.10 |
| Pay of civilians | 245.96 |
| Movements costs | 55.72 |
| Supplies (petrol, oil, food, fuel, light, etc.) | 131.61 |
| Production and Research | 658.85 |
| Works, buildings and land | 111.62 |
| Miscellaneous services and other charges | 100.49 |
| Total | 1,655.60 |
| | ($4.64 Billion) |

Britain's defense spending takes about 7.2 per cent of the total Gross National Product, and accounts for about one quarter of all Government expenditure. About 52 per cent of the entire defense budget goes on pay, food, clothing, housing and movement of forces. Another 10 per cent of the budget goes on what is called in Britain the "contributions to the strategic nuclear capability of the West"—which includes the cost of the V-Bombers of RAF Bomber Command, the Blue Steel stand-off guided bomb, the acquisition of the U.S. Skybolt air-launched ballistic missile, the cost of the Thor IRBM bases, and research, development and production of nuclear weapons.

The basic British defense philosophy was summarized in this year's White Paper as follows: "There is only one answer to the threat to mankind posed by armaments. This is to reach a satisfactory agreement on general disarmament under effective international control . . . Until general disarmament has been achieved, peace rests on the maintenance of adequate power by the West to discourage

aggression by the Soviet bloc or by China.

"Our own contribution to the deterrent strength of the West must itself be balanced both as against other demands on the economy, which we must satisfy if we are to hold our own in the struggle of competitive co-existence, and as to the proportion of our resources devoted to the various components of the Defense program. We seek to achieve the balance that will best serve our own military needs, as well as the needs of the Western Alliance."

The White Paper made it clear that Britain expects to maintain its contribution to the Western deterrent over the next decade by weapons carried in aircraft.

The two principal bombers are the Avro Vulcan and the Handley Page Victor, of which Mark 2 versions are coming forward. These will be equipped with the Avro Blue Steel guided stand-off bomb, whereby the bombers will be able to launch missiles at a target from some distance, and this weapon will later be supplemented by the Douglas Skybolt air-launched ballistic missile, on which Avro, one of Britain's prominent aircraft manufacturers, is working closely with Douglas.

Beyond the V-Bombers, a new tactical strike aircraft is being developed—the TSR-2—which is expected to enter service in the middle 1960s, and which will be capable of attacking the enemy underneath his radar curtain. Britain also maintains a substantial front-line fighter force, currently being equipped with the new English Electric Lightning supersonic fighters, of which the Mark 3 version has now been ordered. The Lightnings are taking the place of the Hawker Hunter, which has been one of the mainstays of Fighter Command for some years. The Lightning is expected to remain in service for upwards of a decade.

On missiles, the RAF is being equipped with the Bristol Bloodhound surface-to-air anti-aircraft missile, while the Army is being equipped with the English Electric Thunderbird surface-to-air missile. Airborne missiles include the de Havilland Firestreak.

Britain does not itself have any longer a British-designed military ballistic missile. The de Havilland Blue Streak, which was intended as a medium to long-range (long, that is, in the British sense of 2,000 miles or more) ballistic missile, was abandoned last year, in favor of adopting the Skybolt as an air-launched weapon. Blue Streak is being kept running on a lower financial scale, as part of an overall British-French joint plan to develop a space research program. The reason for this decision lay in the cost of the Blue Streak program, which, it was estimated, would have cost some £600 millions to complete—a sum, it was considered, that Britain could not afford.

This tailoring of projects to suit the available resources is discussed in detail in the current year's White Paper. Pointing out that plans may be radically affected by technological change, it said:

"At this time of rapid scientific development, even advanced weapons are almost sure to be superseded by something still more advanced. If we are to maintain our position in the world, we must be ready to start new research projects, however complex they may be. Equally, we must be ready to scrap anything that has served its purpose, become outmoded, or whose ultimate cost may prove to be beyond our resources.

"Both the U.S. and Russia spend on research and development alone sums greater than our total defense budget. We obviously cannot afford to spend on this scale, yet we have to insure that the quality of our defense research and development is at least equal, and that it is efficiently and economically carried out. It is also necessary to keep close watch on the tendency for the cost of maintaining armed forces of a given size to rise steadily over the years."

These statements, in fact, provide the whole key to British defense thinking and spending: *the aim is economy, yet efficiency; strength, without waste.* It is for this reason that British defense thinking in recent years has been closely tied in with that of the U.S. and of the various other partners in the Western Alliance.

Currently, Britain is discussing with Western Germany the possibility of closer links by providing training and repair facilities in the U.K. for West German forces. Plans also include development of a vertical take-off fighter from the Hawker P-1127 VTOL, prototype fighter.

Interdependence is also being sought in other ways: Britain is providing facilities in the Holy Loch, in Scotland, for a depot ship and floating dock for the maintenance of the U.S. fleet of Polaris missile-submarines. The U.K. Government has also made proposals for a comprehensive study of the nuclear armory in NATO, "with the purposes of making it as effective as possible without waste of resources, and of strengthening the alliance."

Britain contributes Valiant jet bombers and Canberras to NATO tactical air forces, while the White Paper also made it clear that "if the Alliance should decide to set up a stockpile or pool of nuclear weapons for the *tactical* role, we should be willing to participate, provided we were satisfied that political control was such as to insure rapid decisions in an emergency."

In addition to making these direct or joint contributions to defense, the U.K. also maintains a large number of units overseas—ground, sea and air—throughout the British Commonwealth. These units are supported by a large transport aircraft force, run by RAF Transport Command, which currently includes 23 Britannia turbo-prop long-range airliners, 10 Comet C2 jet transports, and large fleets of piston-powered Hastings, Beverley and Valetta transports.

These fleets are now being augmented: a fleet of 56 Argosy turbo-prop freighters is on order, together with 10 giant Belfast turbo-prop freighters. New orders are being placed for fleets of turbine-powered helicopters, and it is probable that some time this year a decision will be taken to order a fleet of Vickers VC-10 jet airliners.

Britain's spending on defense has now been running at around £1,600 million a year for some years, and the signs are that it will continue to do so for many years to come, short of a world-wide disarmament agreement rendering such expenditures unnecessary. While a defense program is essential, however, Britain will continue to provide it, within the limitations of her economic resources. The point to be borne in mind is that while that program may appear to be small in comparison with that of the U.S., it is still the largest of any country in Western Europe or the Commonwealth, and is as much as can be carried at the present time. ■

# Research Rundown

*Jackson Assays R&D Spectrum*

**The Government's top-level science organization will be next to occupy the spotlight** of Senator Henry M. Jackson's Subcommittee on National Policy Machinery. How to prevent other scientific Pearl Harbors like Sputnik is the big question the Jackson group wants answered. The Senator also wants to find out how to speed up decision making on high priority military and civilian scientific projects, and how to get more mileage out of the multi-billion dollar Research and Development budget.

**Recommendations to eliminate the creaks and groans** from the sprawling scientific agencies of the Federal Government are now being drawn up by the subcommittee staff. The report on the Jackson staff findings will be based on searching public hearings on Government science technology and policy.

*Services Favor Gas Turbine Power*

**Increased emphasis on the gas turbine engine** as the military power plant of the future, particularly for aircraft, is becoming more evident. Maj. Gen. Richard D. Meyer, the new Assistant Chief of Staff of the Continental Army Command, has predicted that the entire new family of Army aircraft eventually will be turbine powered. Marines favor gas turbines also for their specialized aircraft and both the Army and Marines see gas turbine engines and the possible solution to multi-fuel power problems for ground vehicles.

**Significantly,** Army's new light observation helicopter—for which Bell and Hiller produced winning designs in the recent competition—will be powered by an Allison T-63 with 250 horsepower. Also under development are the T-53 in a series from 860 to 1100 HP, and the T-55 at 2,200 HP.

*Industry to Get More Army R&D*

**Industry may be slated for a bigger slice** of the Army $1-billion dollar a year research and development program as a result of the current re-evaluation of R&D management procedures. The objective is to reach an equitable balance between "in-house" and contract work. During the past fiscal year, about one-fourth of the R&D appropriation was allotted to Army's technical services and the balance went to industry, other Federal agencies, universities and non-profit institutions. Prediction: there will be no expansion in Army's in-house facilities and activities; maximum use henceforth will be made of contract work with qualified industries and laboratories.

*Navy to Choose New VTOL Craft*

**Selection of a small number of VTOL aircraft for operational testing** as a tri-service vehicle is expected to be announced by Navy's Bureau of Weapons before the end of this month. More than 30 contractors were invited to participate. The capability requirements included the following: operational from unprepared sites and amphibious assault ships, 8,000 pound payload, maximum speed 300 to 400 knots, cruise speed 250-300 knots, and hovering capability ten minutes.

*Del Mar Enters Helicopter Field*

**A new entry in the light helicopter field** has completed 50 hours of qualification flight testing. Powered by a modified Kiekhaefer Mercury outboard engine, the vehicle is a member of the Whirlymite group of small manned and droned military helicopters produced by the Del Mar Engineering Laboratories of Los Angeles. As an alternate power plant, a lightweight gas turbine engine is available. The Whirlymite group employs a "multi-pak" design which enables specialized fuselages to be attached to the basic helicopter without modification of the main rotor, tail rotor and their drive and control systems.

*One of a Series*

# The Man You Need Needs You

**Leadership can be improved by focusing attention on immediate problems, particularly those involving human relationships and business ethics.**

*by William M. Allen*
*President, The Boeing Company*

LEADERSHIP, I find, is a disarming word. The word "talent" is equally disarming. Both have for us a magic which causes us to say, "If we had more or better leadership—or talent—we could better do the job." I would submit that with respect to both leadership and talent, our need is not necessarily for more, but for better use of what we have.

Is there another country or another society in the world where there is a greater abundance of opportunity for the development of leadership and managerial talent? I can think of none. Our complex of private, public and military forms of organization demand the early recognition and continuing development of managers and leaders.

. . . if you are setting out to improve the effectiveness of management talent, I am doubtful that the existence of a formal program of development or training alone will be sufficient. The other things which I believe are required certainly are not original with me; I am sure you have read or heard them expressed in other terms many times before.

First, it is necessary that the proper climate of organization be created—an environment which will in fact stimulate the people of the organization to exercise their capabilities to the fullest. Now, that is not an original statement nor does it convey an original thought. But, it is a task which requires considerable ingenuity and determination.

The ways in which that climate may be created will not have the sound of newness for you either. They are: honesty in management, proper incentives for best effort, the constant recognition that the individual must be dealt with as a person and not as a unit, and the fact that strong ethical principles must emanate from the top and must be insisted upon in the organization.

Honesty stands high on the list of virtues in our society, in part for reasons that are obvious, yet in great measure, I believe, because honesty is a quality so difficult to achieve in all things. If you are to make an honest evaluation of a man's abilities, rooted in his merit, you are faced with a task that is by no means simple.

The same may be said of incentives. I feel certain that we know not a great deal about incentives. When a chief executive comes face-to-face with the question, what are the most powerful incentives for a given man in a given situation, he knows that the judgment he must make will be neither easy nor perfect.

To know that a company is only as good as the people who compose it, and to realize that you bear ultimate responsibility for making best use of the human resources of an organization, is a greater challenge than any financial or technical problem yet conceived.

Also it is true that men establish the ethical principles by which an organization lives. If business ethics may be defined as concerned principally with the character, the actions and the end objectives of a business organization, the chief executive who is truly concerned with establishing ethical principles knows that every day's activities, every day's decisions and instructions are inevitably bound up with ethical considerations.

The recent anti-trust cases described with such flavor in newspapers throughout the country leave no question but that business and businessmen have constantly a good deal of thinking to do in this regard.

Once you have created the climate of which I speak, or if you have the knowledge that you are doing your very best to achieve it, you have still ahead the task of putting the right man in the right job—where he has an opportunity and the desire to exercise his capabilities to the fullest, thus making the greatest contribution of which he is capable.

The opportunity, and I select that word deliberately, to "launch out ever and again into the streams of thought of men far different" from himself is an opportunity he has to seek, deliberately, for himself.

It may be that business is now evolving a changed point of view toward the training of its executives. If we look first to the present, Mr. Mc-

*(Continued on page 49)*

# ASTIA Keeps Science Data On Dole Basis

*by Paul Means*

THE U. S. Military establishment is cutting its own throat in the area of technological communication.

The dissemination of technical information to scientists and engineers engaged in military research and development is being bogged down because of interservice rivalry, lack of financial and organizational support, duplication, and ignorance of where to get it on the part of some who have a "need to know."

The situation can be corrected if the President of the United States and the Secretary of Defense recognize the problem, knock a few heads together, and appropriate a minimal amount of money which would be amortized within ten years because of operating economy.

Department of Defense planners had hoped to solve this problem in 1951 with the establishment of the Armed Services Technical Information Agency, giving it the responsibility of providing "a central service within the Department of Defense for the efficient interchange of scientific and technical information . . ."

But ASTIA doesn't get all of the technical documents needed to maintain a complete file, and *must compete with 70 to 100 duplicating reference units within the three armed services.*

• Background—The need for a military "bank" of scientific reference documents and reports did not exist prior to World War II. Little basic or even applied research was classified then, and professional journals and societies were able to keep scientists abreast of developments.

But the avalanche of technical information in almost every area of interest, created by intensified research during and after World War II, and the greater amount of information placed under security classifications, resulted in a log jam in communication.

Besides slowing down important research projects, the lack of convenient reference and checking contributed to much duplication. Unable to determine the most practical starting point for a research or development project, scientists found it difficult to eliminate needless repetition and to avoid gaps in research.

Formation of ASTIA did not completely solve the problem.

The organization found it impossible to keep up with the growing demand for service, and the tri-service regulation governing its operation allowed the services to withhold many documents on the nebulous ground that they were "sensitive."

Consequently, many specialized reference systems have been established within the three services by groups feeling that they needed a more efficient service and more information than ASTIA at that time could provide. Many duplicate ASTIA's function in varying degrees.

Early in 1960, after almost two years of preparatory effort, the Agency speeded up its service by installing an electronic data processing system initially designed to double its capability. In its two major workload areas —documents and bibliographies—demands for service are already taxing the doubled capacity.

The Agency, which was placed under the control of the Air Force Systems Command for administrative purposes, presently stores 600,000 technical reports that can assist military researchers in their work.

This year about 3,200 military researchers and private industries contracting with the military will ask the Agency to supply them with almost 700,000 copies of reports.

Another 6,000 government and industry scientists will walk into one of ASTIA's five regional offices and ask to see desired technical documents. About 3,000 users will ask for preparation of bibliographies listing all information the Agency has in a particular area.

Approximately 150,000 military and industry people will look through ASTIA's Technical Abstract Bulletin, a semi-monthly publication which lists some 25,000 new reports ASTIA catalogues each year.

Though the figures are impressive, they do not begin to approach the amount of material that should be handled through ASTIA.

Evidence amassed in ASTIA's files indicates a great many people eligible to use the Agency's service do not know about it—only a few know how to use it effectively.

Others involved in projects the three services like to keep close to their chests cannot get the type of data they need.

The more advanced the area of research, the less chance a group will be willing to tell scientists in other groups about it, and the less chance ASTIA will be given the document.

One of the weakest areas of the Agency is that of advanced missile development, such as Polaris, Minuteman and Pershing.

The services withhold this information under a Directive which requires them to give ASTIA all technical documents up to "secret" unless they are considered "sensitive."

What the difference between "secret" and "sensitive" is has never been explained, and the latter term is not defined in any government directive.

The originator of the document also has power to tell ASTIA who will get to see it. Though a necessary requirement, this administrative extension of the "need to know" rule also operates to keep many who "need to know" out in the cold.

Some originators of technical data are of the opinion that "no one can see my document unless he can show to me he needs it."

And, of course, the scientist on a related research project in another service may not be able to determine whether or not he needs the document unless he *does* see it.

About ten per cent of the documents ASTIA receives have limitations as to who can see them, over and above the customary "need to know" provisions.

Besides documents intentionally withheld by services, there are many others which should be in the ASTIA library that are kept casually, or because of lack of knowledge about the Agency's purpose. A document may not be sent merely because so many have been withheld for political or other reasons that the particular organization has simply forgotten about this requirement.

Many of the technical information activities within the three services duplicating ASTIA provide effective roadblocks to the free flow of literature.

They will receive documents labeled "sensitive" that ASTIA will never see, therefore effectively depriving a majority of DOD research and development people of their value.

These special information centers increase in number each year even though ASTIA has improved to the point where many are unnecessary. (Five new ones have been set up within the last year.)

This is not to say some of these information centers do not perform an important service, but the number indicates how little many organizations rely on the centralized service. The result of this is lack of adequate communication of a DOD-wide basis.

The problem of duplication could be examined at the Department of Defense level and many special information activities eliminated. The problem

of interservice rivalry and the subsequent withholding of information to the other services through ASTIA could be solved by a DOD directive defining the term "sensitive," and by strengthening the provisions governing ASTIA.

ASTIA has some difficulty due to its being under Air Force Systems Command for administration. A DOD agency under Air Force Management creates suspicion within the other services and does not give it the stature needed to command an adequate response from the service organizations. This is not the fault of Air Force Systems Command. Many ASTIA officials feel it would be beneficial to place it directly under the Secretary of Defense.

ASTIA can also speed up its system by further automation. The improvements would cost between $2-million and $5-million and the operating economy affected would permit amortization within a five to ten year period.

ASTIA now has an annual budget of $2,720,000 and a staff of 361 to handle a workload that averages 2,600 requests daily.

The electronic data processing system installed last year allowed ASTIA to cut the time needed to service requests for reports and bibliographies almost in half. Coupled with a mechanized handling system which filmed those reports accepted for the library after they have been abstracted, (which could retrieve the documents almost instantaneously upon command of the computer) the time needed to service a request would be reduced to the point where ASTIA could fulfill even the most urgent needs.

The savings would result from reduction of personnel who now perform the slow tedious task of handling incoming documents for the library and outgoing requests.

Presently a request for a bibliography on a certain subject takes ten working days to fill. Including weekends and holidays, this means that the order may not be completed for three weeks to a month.

Under a comprehensive automation system, a bibliography request could be filled in two working days!

Now, a request for a stocked report can be sent out three working days after receipt, and reports not in stock take about nine working days. The proposed system would get both out to the user in two days.

ASTIA asks that ten copies of a report be filed with it so that one copy can be manually filmed and the other nine filed in stock. The proposed system would require one copy, which, when filmed, would provide automatic retrieval of the desired number of copies. ■


# Procurement Trends

*Single Manager Changes Due*

**Recommendation to standardize the requisition and issue procedures** of all single manager operations has gone out from the Pentagon to all three services for approval. OSD expects the final okay by the start of the fiscal year. Standardization idea in forms and methods for issue and requisition of supplies which come under the single manager wing will be significant and far-reaching, if carried out. Target date for implementation is one year following separate-service approval.

Recommended changes drew on best ideas in the requisition and issue procedures of the three services. Advance reaction from military is that ideas are so sound services may well extend the same procedure to all supply items, even where they don't concern single managerships.

**Object behind the move:** "if we don't standardize the procedure, all a single manager system can really hope to do is pull a supply operation out of a service and put it some place else. The net result without standardization is that we end up with only eight or nine different new types of supply operations which have been re-labelled 'supply organizations.' This may look good to the management experts, but without standardization, it could end up being just so much eyewash."

*Army Will Buy 4,000 Aircraft*

**Army expects to acquire its new light observation helicopter** at the rate of 450 a year by FY '65. The new LOH is to replace Army's L-19 Birddog fixed wing, the H-13 Sioux helicopter and the H-23 Raven helicopter. Total procurement will involve $200-million for 4,000 LOH vehicles by 1970. To man these and other aircraft, the total number of Army aviators will be increased from a current 6,500 to about 10,000 when the program reaches its peak. Objective: to furnish each division unit commander—down to company level—his own LOH.

*Skeptics Eye Aircraft Funds*

**Hard nosed Air Force observers** are interpreting Congressional insistence on providing money for additional aircraft as nothing more than political soft soap. If the money had not been recommended, they say, the airframe manufacturers would be looking for Congressional scalps. They predict that the current Administration—like the previous one—is going to let the money get hung up in the budget because (1) any serious addition to the aircraft inventory would be a refutation of President Kennedy's announced course of action, and (2) the proposed boost involves aircraft which are already obsolescent.

*Air Force Demands Lower Costs*

**Overpricing by industry on Government contracts** is under scrutiny by Air Force. Reductions can and should be made, Air Force insists, not only by individual firms competing as prime contractors, but by intra-company subcontracting among company divisions. If reductions are not achieved, Air Force warns, Congress may direct another across the board cut in appropriations which cost industry one-half billion dollars over the last three years.

**Item:** Air Force has found that in many cases there has been a tendency toward reliance on retroactive pricing rather than good initial pricing.

**Item:** Estimates too often employ "ball park" or "educated guess" techniques. These involve conferences between engineering, manufacturing, contracting and purchasing personnel to develop their "feel" for project under consideration.

**Item:** There is little evidence to indicate the use of detailed estimating except in occasional instances. Detailed estimates should include complete calculations, records and quotations for possible future use. In most cases, such documentation is not available.

## The Man You Need

*(Continued from page 45)*

Namara of Ford and now of the Department of Defense may exemplify what I have in mind. As with others who preceded him, McNamara divested himself of a lifetime's accumulation of stocks and bonds in order to enter the public service.

Mr. McNamara had a decision to make involving much more than money. Would his leadership abilities and his talents be more valuable, more useful, at the service of his country than at the service of Ford? An increasing number of the nation's clearly superior executives have asked similar questions of themselves in recent years; we can assume that there are many whose names we do not know who answered negatively, and we can identify easily a number who have replied in the affirmative.

Looking to the future, it appears possible (and certainly I believe it is desirable) that the day will come when not only the best but many men of business will place distinguished public service at the summit of achievement, a step above great success in business alone.

If that prospect does in fact exist, a series of fundamental changes will take place in business. There are two such changes which would have a bearing on improvements in the effectiveness of management talent—and on its development.

The first is the likelihood that the businessman's idea of what success and fulfillment are made of would be altered. He would come to look upon success in a more broad definition than we use at present, and his sense of fulfillment would be less than satisfactory if he failed to extend his talents and abilities beyond the sphere of business alone.

Secondly, if that change were to take place, another would follow suit: it is that the businessman's preparations for leadership—in this more full sense I have endeavored to describe—would demand of him that he interest himself early in life in not only the profession of management but in the goals of our society, as a whole.

This is not a formula, it is one basis of a philosophy from which the individual must set his own directions. I would submit that when—and if—changes such as these take place, the business executive will become newly challenged and newly stretched. In the process, he would become a far more effective, more responsive—and in the final analysis, a more responsible—leader, for his company and his country. ■

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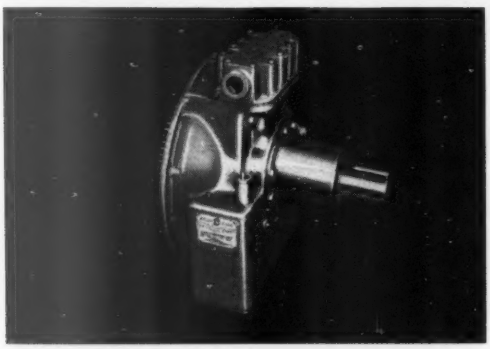

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